Manitoba Medical Review

Annual Meeting: Manitoba Medical Association, Sept. 25, 26, 27. Winnipeg

Vol. 25 **APRIL, 1945** **No. 4**

Intersexuality, by S. S. Peikoff 135
Carcinoma of the Cervix Uteri. Review of Treated Cases, by John D. McQueen 145
Primary Carcinoma of the Lung, by H. M. Edmison 147
Allergy, by C. H. A. Walton 148
Right-Side Abdominal Pain, Appendicitis or "Bands," by W. A. Bigelow 149
Medical Events for April 150
Obituary 150
Clinical Luncheon Reports 153
Injuries to the Parturient Canal 153
Episiotomy 153
Hypernephroma 153
Inhalation Burns 154
Tuberculosis Lymphadenitis 154
Subacute Bacterial Endocarditis 155
Stevens-Johnson Disease 156
Pancreatico-Duodenectomy 157
A case of Subacute Bacterial Endocarditis on Treatment with Penicillin 157
A Suggested New Design for the Intramuscular Drip Apparatus 158
A Case of Pseudomyxoma Peritone 153
Winnipeg Medical Society—Notice Board: The Meetings 161
Bills and Quacks 161
Something Old: Doctor Cheyne and Medical Courtesies 163
Something New 163
Editorial: This Issue 165
Allergy and Radiology 165
The Vancouver Section 165
Manitoba Medical Service 169
Personal Notes and Social News 171
Department of Health and Public Welfare: Comparison of Communicable Diseases 173
Mortality Statistics 173
Manitoba Health Plan 1945 174

LACTOGELL E.B.S.

"Sometimes it is better to put off until another day . . ."

A PHYSICIAN frequently finds among his patients, women who should not bear children or for various reasons should postpone pregnancy. In such cases, he can confidently prescribe Lactogell, E.B.S., with assurance of satisfaction to his patients and himself.

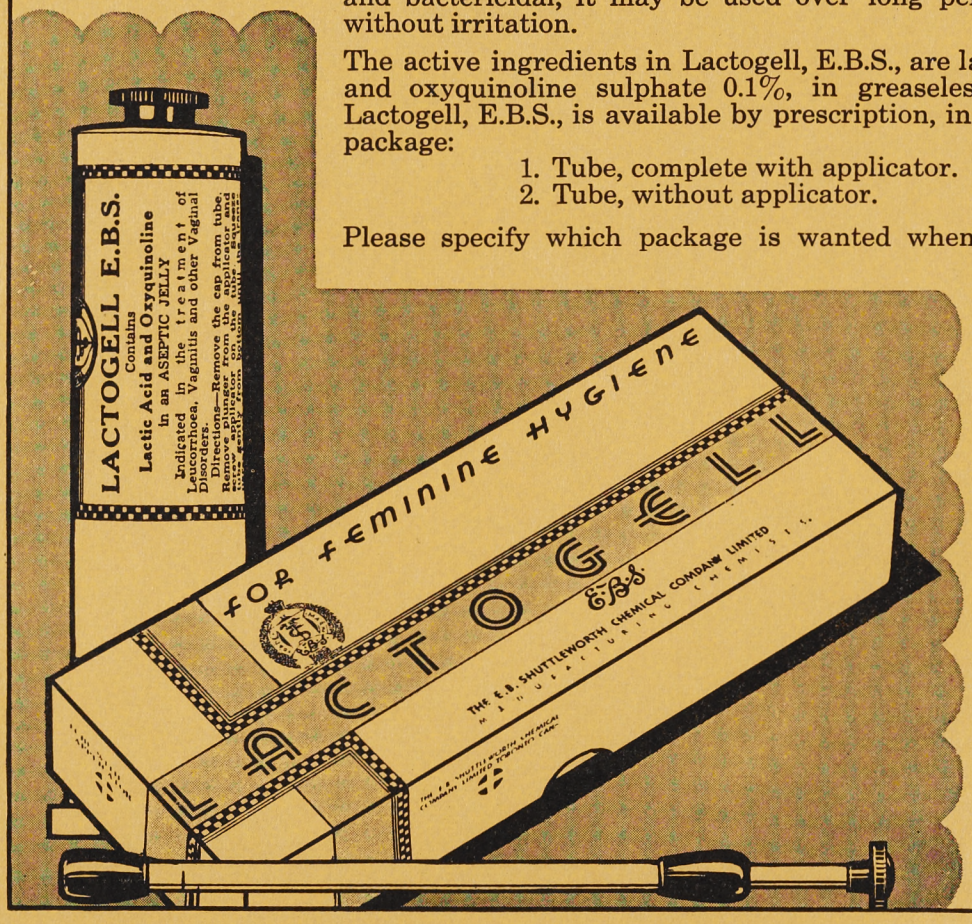
Women approve Lactogell, E.B.S., because its consistency is such that even at body temperature and diluted with vaginal secretions, it does not become messy. They also appreciate its delicate, ephemeral perfume.

Physicians approve Lactogell, E.B.S., because its pH (3.2) is so uniform. Physicians know too, that while it is both spermicidal and bactericidal, it may be used over long periods of time without irritation.

The active ingredients in Lactogell, E.B.S., are lactic acid 1%, and oxyquinoline sulphate 0.1%, in greaseless jelly base. Lactogell, E.B.S., is available by prescription, in two types of package:

1. Tube, complete with applicator.
2. Tube, without applicator.

Please specify which package is wanted when prescribing.



THE E.B. SHUTTLEWORTH CHEMICAL CO. LIMITED

525 Logan Avenue, Toronto 6
Ontario

A wholly Canadian company

ESTABLISHED 1879

MANITOBA MEDICAL ASSOCIATION

Canadian Medical Association, Manitoba Division

Executive Officers

President
STUART SCHULTZ

First Vice-President
P. H. McNULTY

Second Vice-President
J. R. MARTIN

Secretary
D. L. SCOTT

Treasurer
A. M. GOODWIN

Past Presidents
F. K. PURDIE
D. C. AIKENHEAD

★ ★ ★

Members of the Executive

Representatives of College of Physicians and Surgeons of Manitoba

H. O. McDIARMID, Brandon W. G. CAMPBELL, Winnipeg

Members Elected at Large

EYJOLFUR JOHNSON, Selkirk
J. T. CRUISE, Winnipeg
A. F. MENZIES, Morden
A. HOLLENBERG, Winnipeg
J. MURRAY MATHESON, Brandon
H. F. CAMERON, Winnipeg

Representatives of District Medical Societies

Southern
JOHN C. ELIAS, Elm Creek

Northern District
R. E. DICKS, Dauphin

Brandon and District
H. S. EVANS, Brandon

Central District
G. H. HAMLIN,

North-Western
E. D. HUDSON, Hamiota

Portage la Prairie

Winnipeg Medical Society
F. D. McKENTY
Winnipeg

North of 53
N. G. TRIMBLE, The Pas

Manitoba Health Officers' Association
A. W. HOGG

Representative on Canadian Medical Association Executive Committee

F. G. McGUINNESS, Winnipeg W. G. BEATON, Winnipeg
Alternate

★ ★ ★

Manitoba Medical Review

Published Monthly by the

MANITOBA MEDICAL ASSOCIATION

Canadian Medical Association, Manitoba Division

Editorial and Business Offices

510 MEDICAL ARTS BUILDING, WINNIPEG

Editor

J. C. HOSSACK, M.D., C.M. (Man.)

Associate Editor

R. B. MITCHELL, B.A., M.D., C.M. (M.), F.R.C.P. (C.)

Business Manager

J. GORDON WHITLEY

Annual Subscription, $2.50

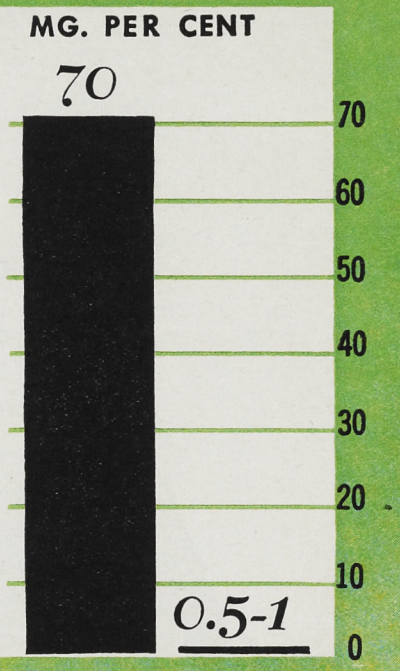
MORE EFFECTIVE LOCAL CHEMOTHERAPY IN OROPHARYNGEAL INFECTIONS

HIGH
SALIVARY SULFATHIAZOLE LEVEL

Chewing one tablet of White's Sulfathiazole Gum for ½ to 1 hour promptly provides a HIGH SALIVARY CONCENTRATION of therapeutically active sulfathiazole, averaging 70 mg. per cent throughout the chewing period.

LOW
(NEGLIGIBLE) SYSTEMIC ABSORPTION

Even with maximal dosage, resulting blood levels only occasionally reach 0.5-1 mg. per cent—so low that systemic toxic reactions are virtually obviated.



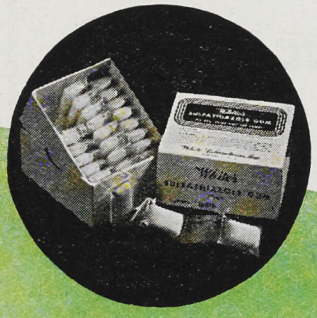
White's SULFATHIAZOLE GUM*

provides an efficient and practical method of effecting *immediate* and *prolonged* topical chemotherapy in oropharyngeal areas not similarly reached with gargles, sprays or irrigations.

INDICATIONS: Local treatment of sulfonamide-susceptible infections of oropharyngeal areas: acute tonsillitis and pharyngitis; septic sore throat; infectious gingivitis and stomatitis, including Vincent's disease. Also indicated in the prevention of local infection secondary to oral and pharyngeal surgery.

IMPORTANT: Please note that your patient requires your prescription to obtain this product from the pharmacist.

SUPPLIED IN PACKAGES OF 24 TABLETS, SANITAPED IN SLIP-SLEEVE PRESCRIPTION BOXES



A PRODUCT OF **WHITE LABORATORIES OF CANADA, LTD.,** TORONTO, CANADA

*

The Manitoba Medical Review

Vol. 25 APRIL, 1945 No. 4

Intersexuality

S. S. Peikoff, M.D., F.R.C.S. (Ed.)
Demonstrator in Surgery, University of Manitoba
Assistant Surgeon, St. Boniface Hospital

Intersexuality as defined by Cawadias[1] is a condition of imperfect sexual differentiation. An intersex is an individual in whom male and female features co-exist in various proportions.

Faced with the responsibility of treating a severe grade of intersexuality, I felt it my duty to become familiar with the proper management of the case which I wish to present.

This little patient, Marilyn (Figure 1), aged 4, was seen by Dr. Jack Lander the night before at her home on account of an impacted right inguinal hernia which was reduced after some manipulation. I saw her the following day at my office, and upon examination I found that she had bilateral inguinal herniae with a small solid mass in each groin which gave one the feeling of examining undescended testes. But in view of the fact that she was a girl, I presumed this was a case of herniation of both ovaries. She was admitted to the hospital and on exploring the right side, I was rather shocked to find that the swelling, instead of being an ovary, was a fully formed testicle and epididymis. Dr. A. C. Abbott was in the adjoining room, and I called him in consultation. I then made a mid-line incision and found that this child had no female organs internally; that is, there were no tubes, no uterus, and no ovaries. Examination of external genitals (Figure 2) revealed: labial folds, vagina ½ centimeter, urethra at base of clitoris.

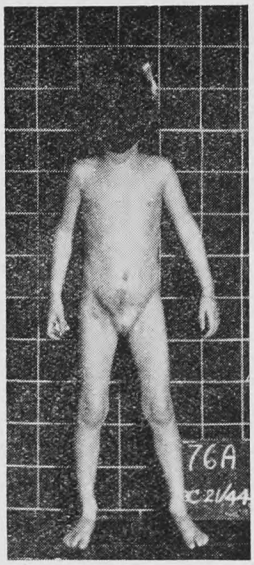


Figure 1

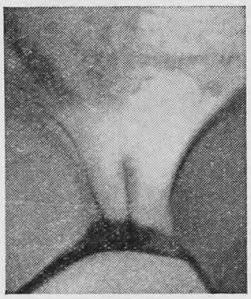


Figure 2

Immediately, there loomed up in my mind several questions as to the proper management of this case:

1. Should the testicle be removed or left in place.

2. Since there is no scrotal sac—spermatogenesis is out of the question, but there will be enough androgen secreted to produce secondary sexual characteristics later on, especially if the testes should descend into the labio-scrotal fold as often happens at puberty. Then what will happen should the child be brought up as a female and masculine secondary characteristics appear—such as change of voice, male stature and hirsutism?

3. Is the gonad on the left side a testicle, ovary, or ovo-testis?

4. Should this child be brought up as a male or female?

5. What should my instructions be to the parents as to the future guidance of this child?

In this case the testicle was removed and the hernia repaired, while repair of the opposite hernia was deferred until such time as some of these questions have been settled.

The following day I wrote to some of the foremost American urologists stating the circumstances and asking their opinion. I received a number of very interesting replies, but very conflicting, since there was no uniformity of opinion. Prior and Company[2] were kind enough to furnish me with current literature. I found, however, that the literature on this subject was very voluminous but unfortunately the treatment vague and far from standardized. Since then I read an excellent monogram by Cawadias on this anomaly of nature in the hopes of interpreting for myself the proper management of this case.

From all this mass of evidence, I find that the current interpretation hinges chiefly on what really initiates the sex of the individual. In Hippocrates' time, sex was considered to be due to divine intervention. Later when herniotomy was introduced by the Greeks, sex was based on the gonads—that is, testes presupposed a male, and ovaries a female. According to Cawadias, the most recent biological conception, however, proposes that the earliest sexoformic impulse originates in the genes of the chromosomes of the ovum and spermatozoon; later

to be modified and enhanced by a variety of factors, such as the gonads, endocrines, psychological stimuli, vitamins, etc.

Every cell in the human body contains 48 chromosomes. There are two types of cells—somatic and sex.

Figure 3 shows a somatic cell in the process of mitosis, terminating in 2 daughter cells, each of which contains 48 chromosomes, as in the original mother cell.

Figure 4 shows sex cell (ovum and sperm) in process of maturation. The sex cell also contains 48 chromosomes; but one of these has a special duty to perform—it is responsible for sex determination and is called the X-chromosome. The ovum contains 46 ordinary, plus 2 X-chromo-

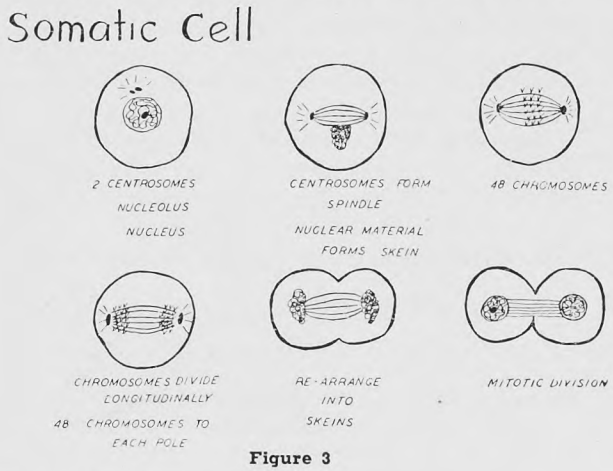


Figure 3

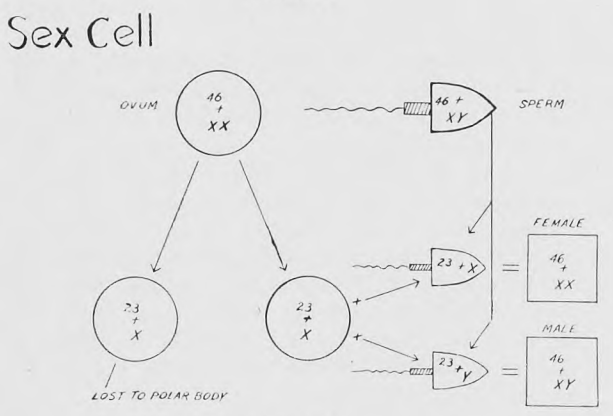


Figure 4

somes. The sperm contains 46 ordinary, plus one X-chromosome along with a Y-chromosome which is structureless, functionless, and has nothing to do with sex determination. The ovum divides into 2 daughter cells, each containing 24 chromosomes (23 & X). One of these daughter cells is lost to Polar body, leaving the other to meet with its sperm mate. The sperm also divides into 2 cells: e.g. (23 & X) and (23 & Y). If the daughter cell (23 & X) unites with sperm (23 & X) the resulting formula is 46 & 2X (Female). If the daughter cell (23 & X) unites with sperm (23 & Y) the resulting formula is 46 & XY (Male). In other words, a female has two X-chromosomes, while a male has only half that number, and it is this difference which determines a male or a female.

It depends on the balance of the genes of the chromosomes. If the genes of the chromosomes are not sufficiently powerful on either side, whether through number, quality or heredity, the resulting balance is abnormal and leads to intersexuality.

Bettinger[3] points out "that every cell carries male (M) as well as female (F) factors, the F factor in the sex chromosome, the M factor in another chromosome pair. The genetic formula for a male is therefore — FMM, for a female — FFMM. The usual clearcut sex determination results from a constant difference in the value of F and M in a

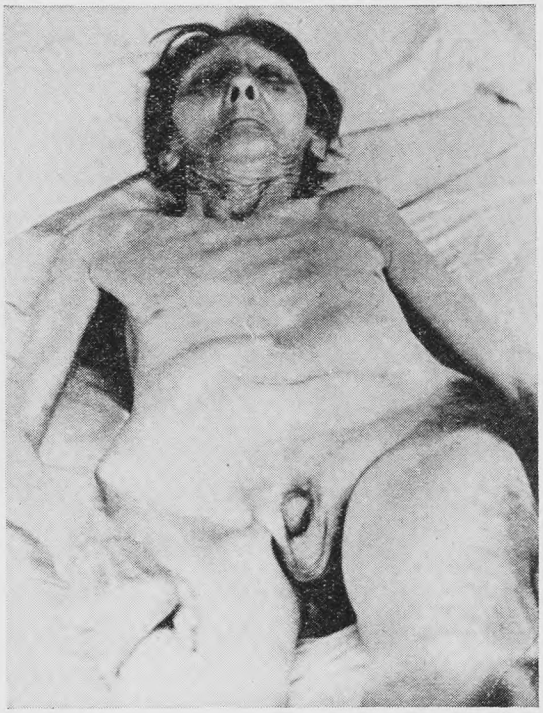


Figure 5

given group; it can, however, be seen that the genetic sex differences are of quantitative rather than qualitative nature."

It has been definitely shown that there are humans without obvious testes or ovaries, who show definite sexual characteristics. I have the privilege of presenting here a case of Dr. J. A. Bourgouin's, which demonstrates this fact (Figure 5). "Aunt Mary" admitted to Male Service, St. Boniface Hospital, with fractured femur. Autopsy showed complete absence of Wolffian System (no testis, epididymis, vas. deferens, prostate or sem-

inal vesicles), or Muellerian system (no ovaries, tubes, uterus or vagina), and yet he presented a variety of sexual characteristics of both the male and the female, e.g.,

(a) Female: Long hair, small head, hairless face, narrow chest, broad hips.

(b) Male: No breasts, scrotal sac, with no midline groove, rudimentary penis about one and a half inches long, and diameter of a lead pencil.

In this case it appears that a sexoformic impulse was initiated early in life but the sexual characteristics were thrown into confusion because the organizer and the endocrine secretions failed to co-ordinate them.

Darwin first pointed out that intersexuality is a normal phenomenon. Actually there is no such thing as an absolute male or female. Every male possesses latent female features, and vice-versa. And so a normal male or female represents the lowest degree of intersexuality; all cases varying only in degree from the normal to the monstrous type. There are numerous facts to substantiate this:

1. All men secrete some oestrin — which is a female hormone.

2. It is common knowledge that rudimentary testicular tissue is found in practically all women.

3. Goldschmidt[4] in very extensive experiments on animal embryos could, by cross-breeding of two different races of species, obtain at will practically all intermediate stages between a normal male and a normal female animal. He also shows that complete sex reversal is possible; that is, genetically 2X individuals could become perfect males.

On this basis, an intersex is bisexual anatomically. That is, the individual may possess both male and female gonads; but it is important to bear in mind that only one sex is predominant while the other is always rudimentary. They may also be bisexual when it comes to function, e.g., The Medical and Surgical Reporter, June, 1899, presents a case of a young mulatto with a marked hypospadias who had an affinity for women, and contracted gonorrhoea in the normal manner. He also had a predilection for the passive role in the act of copulation and transmitted gonorrhoea to a number of his male friends in the neighborhood ranging from fourteen to seventeen years of age. This same individual, however, cannot be bisexual when it comes to reproduction. That is, he cannot produce sperms and ova at the same time—in other words, he cannot conceive and procreate at the same time. It is for this reason that we can no longer classify intersex into true and false hermaphrodites, since reproductively there is no such thing as a true hermaphrodite. And so the old legend of Arnaud's,[5] who offers as a demonstration of complete hermaphroditism the tale of two hermaphrodites of Valencia who married and bore children alternately by mutual consent is thus scientifically disproved. And the story by Affaitatus Fortunius[6], who believes that the magician Merlin was the product of a self-fertilized hermaphrodite cannot possibly be true in the light of our present knowledge. The new classification is therefore:

1. Male intersex (androgynoid—in Greek meaning men looking like women), men who show in their psycho-physical make-up, female features.

2. Female intersex (gynandroid)—females who show male features and characteristics.

I would like at this point briefly to review the embryology of the genital tract in order that I may point out where every embryo is anatomically bisexual up to the eighth week of foetal life. The

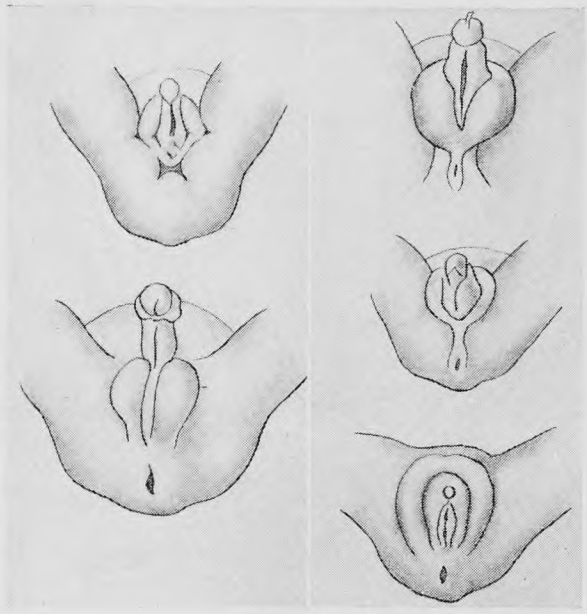


Figure 7

construction of the male and female genital tracts is fundamentally similar; and this fact explains why sex reversal is possible. Figure 6 is an anatomical diagram which may assist the reader in reviewing the embryology.

1. The Gonads

In the lumbar region, just under the peritoneum, there develops a mass on each side which is the future site of the gonads. In the earliest embryo, the germinal layer produces sex cells which up to the eighth week of foetal life are both male and female. At this stage the gland is really an ovo-testis, and is bisexual. From here on, it depends on the influence exerted by the genes of the chromosomes. They determine whether the cortical element of the gonad shall proliferate and so form a testis, or the medullary portion, and thus produce an ovary. If the male sexoformic impulse predominates, the sex cells of the germinal epithelium proliferate to form solid cellular seminiferous cords which extend into the Wolffian body. These cells differentiate later into spermatocytes, spermatagonia, and spermatids. And the cords form the seminal tubule, but they do not become canalized until puberty, and only then are spermatozoa formed.

If the female exoformic impulse is the stronger, it inhibits the formation of the seminiferous cords, and instead proliferate rapidly to form isolated masses of cells

which later give rise to the primordial ova and differentiate into Graafian follicle and corpus luteum.

That is the end of the action of the chromosomes and from here on sex is determined by the chemical action of the organizers and hormonal secretions, and now it depends on balance of these hormones.

2. Ducts

Then, two sets of ducts form almost simultaneously, i.e., Wolffian and Mullerian. If male stimulus predominates, the secretory seminiferous tubules join the collecting ducts of the Wolffian body and form the epididymis, and the Duct becomes the Vas Deferens, and ends in the urogenital sinus. Later the testicle begins to migrate towards the scrotal sac. At the same time the male impulse inhibits the Mullerian duct which atrophies and remains only as a vestigal remnant at its upper end—hydatid of Morgagni, and at its lower end—prostatic utricle, homologous with the Uterus. If the female impulse predominates, the Mullerian tubes unite to form the tubes, uterus and vagina and end in the urogenital sinus, while at the same time it inhibits the Wolffian duct which atrophies and remains only in its upper end—as the para-oophoron and at its lower end—as Gartner's duct.

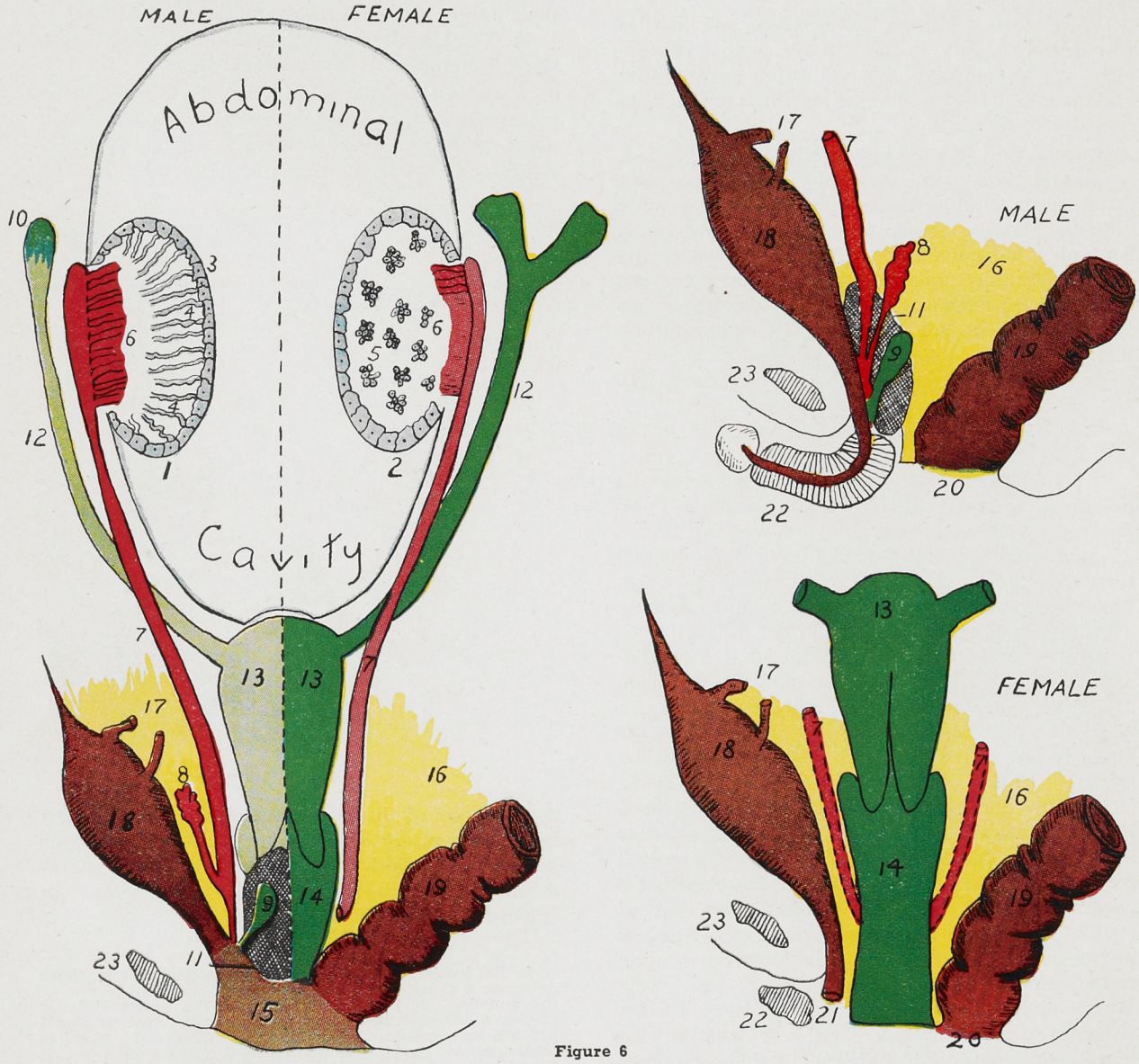


Figure 6

Gonads and Ducts, Urogenital Sinus

1. Testes
2. Ovary
3. Germinal Layer
4. Seminiferous Cords
5. Ova
6. Wolffian Body
7. Wolffian Duct
8. Seminal Vesicles
9. Prostate
10. Hydatid of Morgagni
11. Prostatic Utricle
12. Muellerian Ducts
13. Uterus
14. Vagina
15. Urogen Sinus
16. Rathke's Spur
17. Ureters
18. Bladder
19. Rectum
20. Anus
21. Female Urethra
22. Phallic Tubercle
23. Pubis

3. Urogenital Sinus

Is also bisexual in early stage. In this stage the Genital Ducts and Urinary Tract open into a common perineal cavity—the urogenital sinus.

If the male impulse is predominant it stimulates the growth of a spur of mesoderm (Rathke's) which grows down and separates the genito-urinary tract from the alimentary tract. The urinary tract is prolonged to the genital tubercle (Phallic tubercle—Penis) and the male ducts open into the urinary tract.

In the female, the spur descends and separates the genital tract from the urinary tract, and the urethra issues at base of the Phallic tubercle (Clitoris) and not through it.

4. External Genital Tract

(Figure 7.) Up to the eighth week the external genital tract is bisexual. There appears in the perineum a genital tubercle (Phallus)—destined to be Penis in male, Clitoris in female, and on under surface is the urethral groove. The edges of this groove are urethral folds. On each side of the genital tubercle are rounded lateral ridges, the labio-scrotal swellings. If the male sexoformic impulse predominates:

1. The genital tubercle grows and develops into a Penis.
2. The Urethral groove extends to the end of the Penis-(glans).
3. The urethral folds and edges of urethral groove unite from behind forwards, and thus transform the urethral groove into a canal.
4. The separate labio-scrotal swellings coalesce and form the scrotum.

If the female sexoformic impulse predominates:

1. The genital tubercle develops slightly into a clitoris.
2. The urethral groove remains at the base of the clitoris as an open vestibule and does not penetrate the glans.
3. The urethral folds constitute the labia minora.
4. The labio-scrotal swellings form the labia majora.

If the genetic sexoformic mechanism fails to function completely, an androgynoid personality results — i.e., an intersex.

1. The impulse does not completely inhibit the cortical elements of the gonad and therefore ovarian tissue coexists with testicular tissue—ovo-testis.
2. It does not inhibit completely the Mullerian system and therefore tubes, uterus and vagina may develop in any degree.
3. The spur does not descend and so fails to separate the genital from the urinary tract.
4. The genital tubercle does not develop into a perfect penis.
5. The urethra may not reach the glans.
6. The urethral folds may not unite and remain as a labia-minora—giving rise to a hypospadic urethra.
7. The labio-scrotal swellings do not unite into a normal scrotum and remain as labia majora.

From all this evidence we see that sex differentiation centers and originates around the genes of the chromosomes. The sexual constitution of the offspring is determined at fertilization. In some lower animals, this alone determines the entire sex differentiation. In humans, we have a more elaborate set-up.

1. **Genes**—which act on one cell only.
2. **Sex Organizers** — hormones about which we know very little at the present time, but they affect groups of cells.
3. **Endocrines:**
   (a) **Masculinizing Hormones:**
      1. Testosterone—from testes.
      2. Corticosterone—from adrenal cortex.
      3. Progesterone—which is also a male hormone since it opposes oestrin and comes from the Corpus Luteum.
   (b) **Feminizing Hormones:**
      1. Oestrogen—from the ovary.
      2. Pituitary prolactin — from the pituitary gland.
      3. Thyroidoxin—from the thyroid gland.

Both groups of hormones are found in all humans, male as well as female, but the preponderance of one or other group makes for feminizing or masculinizing as the case may be.

4. **Environment,** e.g., in India, where temperature is high, females mature at an early age and menstruate at seven or eight years.

5. **Nutrition,** e.g., vitamin E and vitamin B, have a definite action on the sexual cycle.

6. **Social, Educational and Psychological Environment** have a tremendous influence on the sexoformic mechanism; phychogenic intersexes are common. "Normally the cerebral psycho-associational centre is sexualized by the endocrines, and the individual acquires a male or female psyche, but education and social environment may interfere with the individual to such an extent, that he becomes an imperfectly masculine, effeminate or homosexual personality — "psychogenic intersex." This is important because if you rear a child as a female and convert her suddenly into a male, the effect of previous environment and training may have a stronger influence on her sexual being than the true anatomic genetic sex to which it belongs.

So far we have been discussing intersex as due to faulty balance of genes, but there are two other important causes of intersexes:

I. Maternal Hormones

One must always bear in mind that by far the greater majority of intersexes are male. By that we mean a male with female characteristics. The reason for that is: The high concentration of maternal oestrin normally circulating in the blood of pregnant women, exerts a feminizing effect on the embryo. If the embryo is destined to be a female, the extra oestrin is of no importance; but should it be a male, the excess maternal oestrin inhibits the masculinizing process, and the male embryo may be born a male intersex. This intersexuality is usually corrected after birth through the masculinizing hormones of the newly born infant. If however, these hormones are insufficient, various grades of male intersex result.

II. Hormonal Tumours

There is also a separate group of intersexes due to various hormonal tumours, affecting females only:

(a) **Arrhenoblastoma of the ovary** — which is really a testicular tumour of the ovary. I pointed out where the sex gland or gonad is bisexual up to the seventh week; that is, composed of male and female cells. If a feminizing impulse is predominant the medullary or seminiferous cords should atrophy completely, but some may remain as cell remnants and become surrounded with normal ovarian tissue. These cells retain their male potentialities, and when they become neoplastic will produce male testicular hormones, same as other

tumours which are able to function similar to the tissues from which they arise (hyperinsulinism — from an adenoma of the Pancreas, or hyperthyroidism—from an adenoma of the thyroid gland). Here the testicular tumour masculinizes the female host, and produces sex reversal; she ceases to menstruate, grows a beard, develops a male voice.

(b) **Adrenal Cortex tumor.** Adrenal cortex arises embryologically from same tissues as gonad and produces a masculinizing androgen—**corticosterone.** The presence of a tumour or hypertrophy of the adrenal cortex in a female will depend on the age of the individual in whom it appears. If the tumour occurs before birth or early infancy of a female child—definite male intersexuality results, and all degrees may exist from excessive enlargement of clitoris to atresia or absence of the vagina. If it occurs after puberty, the female suddenly notices masculinizing changes—hirsutism, cessation of menses, hypertrophy of clitoris, and voice change.

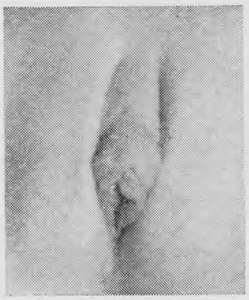
(c) **Pituitary Basophilism or Cushing's tumour.** But this is a disease of young women and rare in children.

(Figure 8.) Case of Dr. M. S. Margolese—showing Hypertrophy of Prepuce and clitoris in what appears to be a female child of 8 years. Is this a case of male intersex due to imperfect genetic balance; or is it a case of sex reversal due to overbalance of masculinizing hormones?

Treatment

The treatment of intersexuality presents very serious and complicating problems. True enough, extreme degrees of intersex are rare, but milder degrees are not uncommon. Improper diagnosis of sex and failure to determine proper psycho-physical make-up results in neurosis, suicide, homosexuality, and numerous irregular sexual practices. The Romans had a simple treatment—intersexes were considered to be "expressions of divine anger," and therefore, to pacify the gods, were promptly put to death. We know now that intersexes are physically abnormal. It is certainly a major handicap as far as the individual is concerned. It is of tremendous importance in forensic medicine, e.g., marriages, wills, divorce, sterility, and impotence. There is, for instance a record of a court case in the American Journal of Medical Science, 1847, in which a will was contested involving huge sums of money, where the sex of the legatee was questioned, because he had menstruated through the urethra since puberty. There are numerous reported cases both interesting and bizarre. There is no accepted standard in evaluating them. Cawadias says that for practical purposes, extreme genital intersexes should, especially if of doubtful sex, be registered at birth as males; firstly, because the greater majority are male, and, secondly, in female schools a male intersex can act sexually as a male and so deflower "her" school fellows, whereas a female hermaphrodite in a boy's school passes unnoticed because of the enlarged clitoris, and the incomplete union of the labia is masked.

Ombredonne first pointed out that "it is wrong and dangerous to label sex solely upon anatomic or histologic morphology of the gonad. This should never be a guide to rational surgical procedure." One cannot determine the nature of the gonad histologically or clinically. A mass in the genital pouch thought to be a testicle from its position has been frequently proven to be one of four or five possibilities microscopically: Some turn out to be



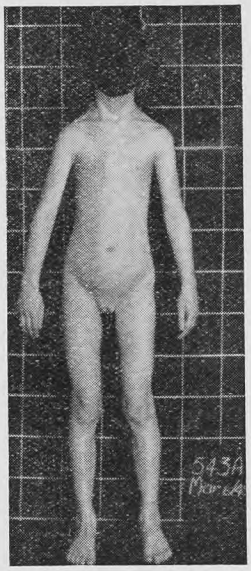


Figure 8

lobules of fatty tissue, others—granulation tissue, testes, ovaries; some are mixed, e.g., ovotestes. Even histologic examination is often insufficient unless serial sections are done, because one part may be a testis and another an ovary.

Even though one finds it to be a testicle, one cannot determine the degree of maturation. This is the chief reason why it is so dangerous to label sex before puberty, and since there is no such thing as a true sex, the individual belongs to that sex which is dominant in him. Sex is, and must be based not only on anatomic and histologic morphology, but also sexual function, which can only be determined at the dawn of consciousness.

Before I attempt to formulate any form of treatment, let me review some case histories and correspondence to get the opinion of some of the authorities.

Case I. Bettinger, S.G.O., January, 1944

Summary of Case: Woman, age 23 years. Came for advice because of abnormal enlargement of the clitoris. At 14 years, her voice became deep like that of a man, she developed hair on the face and had to shave daily. Breasts were flat; never menstruated; brought up as a girl however, she began to admire the male sex, and wished to continue

living as a female. Came to the doctor to have the enlarged clitoris removed. Examination showed an enlarged clitoris, presence of labia majora, and a vagina one centimeter. She was very anxious to be a female. At operation testes were removed and the clitoris amputated; she was then given weekly injections of 40,000 units of oestrin. Gradually she began to deposit fat in a female pattern; the breasts enlarged, and an artificial vagina was created. She married and lived very happily.

Comment: It is important to bear in mind that this patient presented herself long after puberty, that is, at 23 years of age. This is a case of an anatomic genetic male converted to a female by psychological environment. This is a male intersex. Anatomically she was a male. Psychologically, she was a female because of association and environment, and wished to remain as a female; and was treated pragmatically. This is an established form of treatment. By pragmatic sex we mean allowing an individual to adopt the sex in which he or she will feel most happy, even though it is not the true sex. Because if one is forced into the opposite sex, such a person will be miserable and will tend to develop an inferiority complex. Eventually some may commit suicide. Even in the 16th century, Ambrose Pare writes that a hermaphrodite has a right to choose his own sex, and an individual should be considered as a male or female according to his own will. It is up to the physician to perfect that sex by surgery and endocrines.

Case II. J. Alenkvist: Nordish Medicine: Oct., 1941

Summary of Case: Patient came to the doctor at the age of 22, had malformed genitalia. Pubic hair appeared at 17. At, 20, became only slightly attracted to girls. Examination showed labio-scrotal folds separated by a deep fissure, no vaginal opening, no testicles in either fold. The left testicle was felt in the left groin. Between the folds was a hypertrophied clitoris. The body had a feminine appearance. Treatment begun: January, 1940, 10 mgs. testosterone—three times a week (15 injections). Clitoris became longer. Began feeling sex urge more strongly. May, 1940, 25 mgs. testosterone—(51 injections). Penis increased in size. Deep fissure between scrotal halves became shallow. January, 1941, 18 injections of pregnyl (A.P.L.); scrotum formed a sac with a median furrow. Testicle on the left descended into the scrotum, and the right became palpable in the groin. February, 1942, was married; normal sexual functions, but ejections did not contain sperm.

Comment: Here is a male intersex — anatomically a male, and also psychologically and apparently good results obtained with massive hormonal therapy.

Correspondence

The authorities with whom I corresponded were not asked for permission to publish their opinions, and for that reason, their names are omitted. It is by virtue of the difference of opinion expressed by such leading medical men that I felt the replies were valuable and instructive in the final analysis of this case.

Letter I. The amount of information given in your letter of the eighteenth is insufficient to lead to a conclusion as to just what the condition you are dealing with is.

The absence of uterus, tubes, and ovaries intraperitoneally is insufficient evidence to conclude that there are two testes. There is the bare possibility that the gonad on the unexplored side is an ovary or an ovotestis and, therefore you would be dealing with a true hermaphrodite. Since this condition is extremely rare, it is more likely that there are bilateral testes, undescended. The question then arises as to whether the genitalia situation is one of extreme hypospadias with an infantile penis or whether it is a pseudo-hermaphrodite with some pituitary disturbances. Since the clitoris is not hypertrophied, it would, of course, be unlikely that there is an adrenal hyperplasia or adenoma.

Once you are sure of the bilateral testes, there is no doubt in my mind that the parents should be so informed and the child brought up as a male. Plastic operations can be done to make him so. Before this is done, you must be absolutely certain that there are testes.

Recently, I have had a patient who had been operated upon at the age of 12, to which age it had been brought up as a girl, and it was thought by the surgeon that undescended testes were present. The child from then on was brought up as a boy. This patient had a markedly hypertrophied clitoris, but, of course, with a urethra in the sinus urogenitalis, so it was thought to be a hypospadias. The clitoris, of course, was markedly down-curved and the child grew up as a boy and at the age of 19, married. He was married two years apparently happily so, and came in for correction of the curvature. Examination, however, revealed that this patient is a female and there are bilateral ovaries, sections from both sides of which we have as proof; and there are the uterus, vagina, and the tubes present. The gonads, previously suspected without examination, of being testes prove, on examination twelve years later, to be ovaries. You can see what a tremendous medico-legal problem this raises.

Letter II. I should think that the child would be better off being brought up as a female since the external genitalia are those of a female. The testicle which was found in the hernia sac had best be removed because it would probably never function as a gonad. I do not think there is any further treatment necessary. The parent should of course be informed of the condition. With the testes out it would seem that this child should grow up to be distinctly feminine.

Letter III. You should let this child grow up as a girl. You failed to say whether there was a vagina; it really doesn't make much difference, for you did indicate there was a vulva and a small clitoris.

I have run into almost identically the same situation in a young woman recently, and we have had younger children in whom an ultimate decision could be postponed, as in your case.

In any event, you can not make a penis; on the contrary, a vagina can be made by several means. In my patient I made it out of a loop of intestine in a single stage operation. We got a very nice result. The patient has since married and informs me that she and her husband are very happy and that it has worked out satisfactorily on every score.

This patient of mine, interestingly enough, had testes (microscopically); yet, her secondary sex characteristics were those of a woman. Her breasts were well developed; she had a small larnyx and a feminine voice. The pubic hair, however, had rather a masculine distribution. Her hands and feet were somewhat large, but she would pass as a pretty girl anywhere. She was very feminine in all her attitudes as far as I could tell. Yet, just before marrying, she was working on machines in a defense plant as, of course, many other women are now doing.

I did not tell her, her mother nor anyone of the histologic picture of the internal sex glands. Why should they know? She is perfectly happy as she is. I have no publications on the matter, though I have thought of writing up some time the operative procedure we did on this patient. My thought concerning your patient is that, the operation should be postponed until the child is well past puberty. I would be inclined not to even tell the parents of the sex gland, for it will only throw them into confusion. Ultimately a vagina can be made for this youngster, and that will solve the situation as far as any mortal man can imitate the bountiful gifts of nature.

Letter IV. If the testicles are present in both canals they should be left alone. There will be sufficient interstitial secretion to be useful. Male sex hormones can be given in addition if the testicles do not produce enough secretion to give a definite masculine development, but this should be done only after puberty has been allowed to come about by itself. In case both testicles are present the child should be brought up as a male and the parents so instructed.

If an ovary is found in the left side, the testicle should be removed because of the external genitalis. The child should then be brought up as a girl and the parents can be informed if he wishes.

Letter V. I was very much interested in your description of the patient who apparently was a male hermaphrodite. We are agreed that as far as future sex is concerned it would be better to follow the lines indicated by the predominant sexual apparatus. In this case it is definitely male. In fact, the best results are obtained in making a male out of most of these patients.

It would be best to leave the testicle in situ for the time being. An attempt might be made a little later to use A.P.L. in hopes of stimulating growth of the male parts.

It would seem probable that there is another testis which is also undescended. It is very possible that the hypospadias, even though rudimentary, could be corrected later on.

Undoubtedly, the parents should be informed as to the situation.

Conclusion

I apologize to the Endocrinologist and the Urologist for even attempting to publish a discourse on a subject so foreign to me; I have nothing original to offer, except my problem.

Such diversity of opinion among authorities is an indication of the complexity of the problem. The more I study this case, the more perplexed I become. For every argument, there is a contra-argument. This child is unique in that the condition has been recognized so early in life. Usually intersexuality is discovered only when changes at puberty do not fit in with the assumed sex. Then the surgeon is guided by the wishes of his patient. In this case, the patient is too young to understand the situation and can express no intelligent opinion. The principle question is: should things be left as they are until the awakening of sex consciousness? There is no way of determining which sex will then predominate and meanwhile a child externally a female, yet actually a male will grow up as a female. The alternatives are three:

I. Let the mother wait until puberty and then be guided by the wishes or tendencies of the child.

II. Change the method of upbringing to that of a male. Genetically the child is a male. The Wolffian tract is fully developed; the Mullerian system has been completely inhibited. Yet, because the maternal hormones were too strong — or the masculinizing stimulus too weak, the external genitalia have developed so incompletely that the child appears to be a girl. If we wish to make the child live as a male, we must now change his dress and training to fit a boy. Later, androgen therapy combined with plastic surgery and the bringing down of an undescended testis might be successful. There is, however, the danger of failure. The penis may not hypertrophy and the labio-scrotal folds may not close. The psychological problem likely to be created makes one hesitate to make a boy out of this male child.

III. The third choice is to continue to bring the child up as a girl, and at the same time do all we can to shift the sex-tendency to the female side. That is — at the age of ten or twelve, the remaining gonad would be removed, and estrogenic hormone be given in sufficient dosage to neutralize the masculinizing effect of the adrenal and pituitary. Still later, when "she" became conscious of its absence, an artificial vagina could easily be constructed. A recent and simple method has been described with success. (R. Wharton, Annals of Surgery, June, 1940, Baltimore, Md.). A condom 3 or 4 inches long is filled with wax and inserted into the space between the bladder and rectum and left there for three weeks. Vaginal epithelium proliferates and encloses this space. "She" is growing up as a girl, and it would be easy to let "her" develop into a woman; but "she" would never be really a woman, for "she" will never menstruate. What conflicts may arise in the future — we cannot forsee.

Therefore I find treatment very difficult. I have three choices, but every one has grave disadvantages. Doing nothing now is the easiest way out, but then what about the shock of puberty when masculinizing secretions become active. If we attempt to make the child live as a boy, it will be as a freak, recognized as such by his playmates. If we try to suppress the masculine trend, we can succeed only in part. Whatever we do is based on uncertainty and is dangerous. In the words of Hippocrates, "judgment is fallacious, experiment perilous."

Summary

1. A case of intersexuality is presented.

2. Difficulty in determining the proper sex is discussed.

Bibliography

1. Cawadias, A. P., Hermaphrodites: The Human Intersex. Wm. Heinemann Medical Books Ltd., London, Eng.
2. Prior & Co., Hagerstown, Maryland, U.S.A. Consulting Service: Lewis' Practice of Surgery.
3. Bettinger, H. F., M.D., Melbourne, Australia. Hermaphroditism—Sur., Gynec., and Obs.—January, 1944.
4. Goldschmidt, R. "Analysis of Intersexuality of the Gypsy Moth." Q. Rev. Biol., 1931, VI., 125.
5. Arnaud's, Georges. "Treatise on Hermaphrodites." London, 1750.
6. Affaitatus Fortunius. "De Conceptu Androgyni." Venice, 1549.

Carcinoma of the Cervix Uteri
Review of Treated Cases

Summary of Paper Given to The Winnipeg Medical Society, February, 1945

By John D. McQueen, D.S.O., M.D., C.M., F.R.C.S.(C.), F.A.C.S.
Gynaecologist, Winnipeg General Hospital

The time at my disposal will not allow a detailed discussion of all phases of carcinoma of the cervix, so for this reason, should impressions gained or conclusions arrived at in going over the cases reviewed, be given without full detail, your indulgence is requested.

Histologically there are two types of carcinoma of the cervix — Squamous celled or Epidermoid Carcinoma and adeno-carcinoma—over 90% are of the Epidermoid type. Adenocarcinoma spreads and reacts to treatment in much the same way as does a grade ii Epidermoid carcinoma. The Epidermoid type, depending upon the histological picture is designated grade i, ii, iii, or iv. Grade i is the slow growing type, while grades iii and iv are the rapidly growing anaplastic type. The anaplastic undifferentiated growths are more sensitive to radiation than are the low grades.

Clinically the extent to which the disease has spread is recorded as Stage I, when limited to the cervix.

Stage II, when the iternal os and/or the vaginal wall is involved in addition to the cervix.

Stage III, when the parametrium, broad ligaments, base of the bladder or wall of rectum is involved.

Stage IV, when there is widespread metastasis and a solid pelvis.

Very early carcinoma is, as a rule, found on a thorough routine examination and may have caused no symptoms. At one time it was thought that vaginal discharge was the most frequent symptom likely to bring patients with carcinoma to secure advice—now, it is my opinion that menometrorrhagia is a more frequent early symptom. However, a blood-stained discharge is frequently noted. Pain, unfortunately, is a late symptom only. It is imperative that patients be examined thoroughly, bimanually, and, with proper light and good exposure, that the cervix and vault be carefully scrutinized. Neither Schiller's test nor the use of the colposcope is necessary if under favourable surroundings a painstaking visual examination is done. There should be no hesitation in taking a biopsy from suspicious or doubtful cervical lesions—never forgetting the possibility of endocervical lesions.

To emphasize the importance of not delaying a thorough examination in any patient with abnormal bleeding, the following case is cited:

In September, 1938, a 32-year-old patient with two children, one a year old, living forty miles from the city, presented herself, complaining that her previous menstruation had been heavy, that her present one, which started on time, had been very heavy and was still present. A city patient might have been sent home to bed until her period was over and valuable time lost. This out-of-town patient was examined and a fungating carcinoma of the cervix was found. She is well today, has been able to mother her children and perform all the duties of a farmer's wife.

Prognosis—The more of these cases one sees, the more the outcome in any particular case seems unpredictable.

To illustrate I cite three cases:

However, the most important single feature that determines the prognosis is the stage to which the disease has progressed when the patient presents herself for treatment. Some patients stand radiation treatment well—others do not. Only in believing that there is an undetermined factor which may vary in each patient, can one account for the differences in reponse to treatment in patients with similar types of new growth. One wonders if the difference is not at least partly due to "the will to get well." This brings up the question, should the patient herself be told she has cancer? Doubt in the mind of the public that cancer is ever cured, prejudice on their part against the thought of being considered a cancer patient, together with the fear of being definitely told they have cancer, has kept me from telling patients outright that they have cancer. The patient's husband or guardian must be told the whole truth. Usually the patient is told she has a new growth on the neck of the womb which if not treated adequately at once may become serious.

In this series it was found that patients with the ulcerative type of growth (in my hands at least) did not respond to treatment as well as did those with the overgrowth type of carcinoma. Patients developing malignancy in the cervical stump following supravaginal hysterectomy, and those who had been inadequately treated previously by radiation, did poorly.

Carcinoma of the cervix is considered cured if, five years after treatment, there is no clinical evidence of malignancy to be found. It is my belief that (with few exceptions) if a patient is free from evidences of carcinoma 18 to 24 months after treatment, the outlook for a cure is very bright.

As will be seen on a slide shown later, in spite of educational campaigns the majority of patients presenting themselves for treatment are placed in the Stage III group.

Treatment

The only known predisposing cause of carcinoma of the cervix is chronic irritation—for the most part chronically infected lacerated cervices. These should be adequately dealt with whenever encountered—in other words, prevention should be our primary duty. Education of the public to the fact that cancer can be cured when treated early and if we, as a profession, see to it that no delay in treatment occurs once a diagnosis has been made, this will go far to raise the percentage of cures.

Today, in all but a few centres, treatment of cervical carcinoma is by radium and X-radiation. These agents are not harmless. However, with proper screening, application and dosage, injury to pelvic and abdominal organs, particularly the bladder, rectum, ureters and small bowel can be reduced to a minimum. The gamma or penetrating rays of radium in proper dosage have a particular selectivity for the nuceoli of rapidly growing cells; these they destroy while normal cells are little affected. With this principle in mind it is felt that, with suitable and adequate application of radium, except in the far advanced cases, cancer cells in and around the cervix can be destroyed. This lethal dosage, however, does not extend out to the lateral pelvic wall; X-radiation is required to augment this destruction of carcinoma cells in the broad ligaments and pelvic lymph glands. It is just as important to destroy cancer cells in the broad ligaments as it is to destroy them in the cervix. It is my belief that undestroyed cancer cells in the broad is the main reason why our percentage of cures is not higher. For this reason it has been my endeavour to apply radium well out in the fornices, whenever possible, in the first application. Radiation causes fibrosis, narrowing and sometimes obliteration of the fornices so, even though at variance with most centres, provided the patient's local and general condition permits, radium is applied before X-radiation whenever possible.

Each case has to be individualized, the amount and application adapted to her particular need. Local infection must first be eliminated; her general condition must be such as assure a fair tolerance to radiation. It is essential that her hemoglobin and white blood cells be checked before and throughout treatment. In the ideal "set up" a cystoscopic and sigmoidoscopic examination should be done before treatment is started. Cultures from the new growth should also be made.

The cases under review, treated before the heavier voltage X-ray was available, received a slightly heavier dosage of radium than they do now. Until this review was made it was not my impression that the higher voltage X-ray treatment had improved the survival rate.

The average case now receives roughly 6000 mg. hours of radium in and around the cervix, usually in two applications, preferably two to three weeks apart. The average X-ray dosage is 12000 R units through six ports from a 400 KV. machine 55 to 62 C.M. distance, resulting in something over a 5000 unit tumor dose.

Interstitial application of radium other than the use of Gold Seeds when the vaginal wall is involved, has been seldom used during the last ten years.

Any treatment of cancer of the cervix which does not include follow-up examinations at regular intervals becomes a farce. Nothing is more pathetic than to have a patient present herself for treatment, who probably a year or so previously was partially treated, relieved of her symptoms for several months, and only reports back when her pelvis is solid. If requested, it is amazing the effort these patients will make to present themselves for regular check-ups. It is for us to see to it that these patients are advised to report for rechecking when, if evidence of further treatment is indicated, it can be undertaken early.

The 116 cases presented in this review are the public and private cases whose treatment I was responsible for during the years 1931 to 1940 inclusive. All cases treated have been included. A few shown as dead did not die of carcinoma, and as far as can be ascertained, those who have not survived are so shown. Most of those treated in 1941-42 who now seem free from any active malignancy will survive.

A follow-up clinic has been held each month, and recently if patients do not report they are contacted by a nurse. Visualization of the vault, weight record and a rectal examination are the most informative procedures carried out in the follow-up clinic.

Carcinoma of Cervix Uteri — Cases Treated 1931 to 1940 — 116 Cases

		Stage 1		Stage 2		Stage 3		Stage 4		
Years		Pts.	Sur-vival	Pts.	Sur-vival	Pts.	Sur-vival	Pts.	Sur-vival	
1931 to 1935	Grade 1	0	— 0	0	— 0	1	— 1	0	— 0	
	2	2	— 1	4	— 3	14	— 3	0	— 0	
	3 & 4	2	— 1	2	— 1	12	— 0	1	— 0	
		4	— 2	6	— 4	27	— 4	1	— 0	26%
1936 to 1940	Grade 1	3	— 3	0	— 0	4	— 2	0	— 0	
	2	1	— 1	13	— 8	17	— 4	2	— 0	
	3 & 4	1	— 1	7	— 4	21	— 5	9	— 0	
		5	— 5	20	—12	42	—11	11	— 0	35%
1931 1940		9	— 7 77%	26	—16 77%	69	—15 21.7	12	— 0 0	32% (32.7%)

Carcinoma of Cervix Uteri — Cases Treated 1941 to 1944 — 62 Cases

Years		Stage 1 Pts.	Stage 1 Survival	Stage 2 Pts.	Stage 2 Survival	Stage 3 Pts.	Stage 3 Survival	Stage 4 Pts.	Stage 4 Survival	
1941 and 1942	Grade 1	1	— 1	1	— 1	0	— 0			
	2	1	— 1	4	— 1	7	— 2			
	3 & 4	1	— 1	3	— 2	8	— 4	3	— 0	
		3	— 3	8	— 4	15	— 6	3	— 0	44%
1943 and 1944	Grade 1	2	— 2	0	— 0	1	— 1			
	2	0	— 0	2	— 2	7	— 6			
	3 & 4	4	— 4	3	— 2	14	— 9	0	— 0	
		6	— 6	5	— 4	22	—16	0	— 0	78%

Cases shown in Table No. ii are not considered cures, but give some idea of the immediate post-treatment results.

Changes in radiation, probably another effort to have surgery augment radiation as is being done now—by those who are doing pelvic lymph adenectomy in selected cases after radiation treatment, but our great hope for the present is in educating the public to the advisability of early examination, should abnormal vaginal bleeding or discharge occur, and that we as physicians make our examination and treatment thorough.

Primary Carcinoma of the Lung

First of a Series of Articles on Radiology

By H. M. Edmison, M.D.

While the primary object of this paper is the consideration of the radiological diagnosis of carcinoma of the lung, some of the other aspects of the disease must be discussed. As with malignant disease in any other part of the body, little is known of the etiology. When one considers the many theories, the basis of most is found to be chronic irritation or inflammation, resulting in injury to the bronchial mucosa. During the repair of injury the tissue is stimulated into activity with excessive regeneration and pathological growth. It also seems likely that all malignant tumors of the bronchus have their origin in the undifferentiated basal cells of the bronchial mucosa which undergo transformation into any of the cell types which are to be found. These tumors when classified with regard to their cellular structures are: anaplastic, adenocarcinoma, and epidermoid carcinoma. The first of these is most common.

In the majority of cases at least a portion of the tumor mass grows within the lumen of the bronchus, usually arising from the mucosa of one of the main bronchi or an immediate subdivision. The rate of growth varies considerably, depending on the cell type. Some grow rapidly with comparatively early signs and symptoms, while others remain quite small locally, so that their presence may not be suspected until metastatic lesions have made their appearance.

It is either the gradual enlargement of the tumor within the lumen of the bronchus or stenosis resulting from infiltration of the wall and consequent interference with function of the affected portion of the lung which result in many of the clinical manifestations of the disease. It is also these secondary changes which can be detected by radiological examination rather than actual visualization of the tumor. Less frequently the tumor may invade the parenchyma of the lung with little or no effect on the lumen of the bronchus. This is especially true if the lesion originates in one of the minor bronchi. When this occurs the tumor is directly responsible for radiological findings.

Radiographic Appearances

In considering radiological appearances of primary carcinoma of the lung we must understand the nature and course of the disease, for from the onset until the termination events are varied and depend on many factors, especially the site of the primary tumor, the rapidity of its growth, and the rate of local and metastatic spread.

We should also remember that not only does the primary lesion in most cases remain comparatively small, but it usually lies in a portion of the bronchus which is obscured by the shadow of other mediastinal structures, and therefore, we must depend upon indirect evidence. For this reason the disease is usually well advanced before a correct diagnosis is made.

Let us consider a typical case where a carcinoma has begun to grow from the mucosa of the left or right main bronchus. Gradually the tumor increases in size and stenosis of the lumen occurs, until at length there is interference with normal function of the lung on the affected side. At first drainage of normal secretions is impaired, especially in the base of the lung. This is frequently followed by infection, which may even result in bronchiectasis, especially if the tumor is slow growing.

Atelectasis occurs when obstruction of the bronchus becomes more complete. Air is prevented from entering the lung and absorption of alvoelar air takes place. It is then that the lung begins to diminish in size and becomes more dense and more opaque to X-rays. We can now see the reason for elevation of the diaphragm, displacement of heart and mediastinum toward the affected side, and finally, retraction of the ribs. Bronchiectasis, and frequently lung abscess may follow.

In fact, at any time throughout the course of the disease, infection may play a prominent role and obscure the primary cause until revealed at autopsy. Any case of atelectasis in adults, with the obvious exception of inhalation of foreign material, should therefore be viewed with suspicion.

Pleural effusion may also occur at any time throughout the course of the disease, which will probably obscure the underlying lung. This may result from actual invasion of the pleura, and in these cases the fluid is usually serous and blood-stained. If, however, the effusion results from infection, as it may do, then it will of course be purulent. The presence of fluid in the pleural space will affect the changes in pressure brought about by a collapsed portion of the lung, and the mediastinal structures, which would otherwise be displaced to the involved side, may be in their normal position. As the diseased part of the lung is frequently obscured the diagnosis is made even more difficult and pleural effusion may be the only definite finding. We should therefore strongly suspect the presence of malignancy in anyone of cancer age who develops pleural effusion when there is no other obvious cause.

The same sequence of events may take place should the tumor arise in any one of the smaller bronchi, the changes being limited to the portion of the lung supplied by that bronchus.

Unfortunately, the course of the disease is not always as typical as that which has been described. In a surprising number of cases the diagnosis remains obscure until biopsy of a secondary lesion reveals the true nature of the condition. In these the difficulty lies in the fact that the primary growth may remain quite small, producing no symptoms or radiological findings until after metastatic lesions have made their appearance. Brain and bone tumors, enlarged cervical and supraclavicular glands are sometimes found to be secondary to a primary bronchogenic carcinoma, although chest symptoms may be absent and there are no definite radiological signs of the disease. Enlarged bronchial and mediastinal glands may also be secondary to a tumor originating in the wall of the bronchus and, in the absence of other findings, the diagnosis is then easily confused with lymphoblastoma. We must therefore appreciate the difficulties of early diagnosis and understand the limitations of chest films in demonstrating this condition while in its first stages.

There are also less common forms of this condition in which the involvement of the bronchus is comparatively slight, and where even bronchoscopic appearances are atypical. In a similar category are the cases where the tumor originates in a terminal bronchus. In these, parenchymal infiltration is the outstanding feature and atelectasis may not be associated. This will produce definite changes in the parenchyma of the lung which are visible on the X-ray film at a comparatively early stage. These changes, however, may simulate other diseases of the lung, and pleural effusion often occurs early in the course of the disease, as they are usually closer to the periphery.

Allergy

By C. H. A. Walton, M.Sc., M.D.

Herewith is the first of a series of articles on allergy. According to Warrick Thomas of the Cleveland Clinic "Statistical surveys show that approximately 60% of the population has either a major or minor allergy, and that of this group, approximately 10% seeks professional advice." The study of allergy, then, is an important one. In subsequent issues Dr. Walton will cover the subject in the way best calculated to assist practitioners with their seasonal problems as well as with allergic disturbances that are not seasonal. J.C.H.

* * *

Introduction

Allergy is the term used to designate a constitutional diathesis in man, usually of a hereditary nature, characterized by hypersensitiveness which manifests itself by abnormal reactions of tissues to physical or chemical agents. These abnormal reactions produce such clinical states as hay fever, asthma, urticaria atopic dermatitis, etc. There is often some confusion in the terms allergy and anaphylaxis. The latter refers to a condition produced in man or animals more or less artificially. It is an abnormal tissue reaction produced when a sensitizing substance is introduced into the tissues and followed by a subsequent shocking dose of the same antigen. That is the anaphylactic type of hypersensitiveness is acquired and it does not persist. Allergy is constitutional and spontaneous and persists for life.

The word atopy was coined by Cooke to distinguish this spontaneous and hereditary type in man from acquired hypersensitiveness. However, clinically allergy and atopy are really synonymous.

Heredity

Heredity is most important in allergy, and is demonstrable in well over half of the clinical cases seen. If it occurs in the paternal and maternal branches of the family, symptoms are apt to occur in the first five years of life, and usually before fifteen. If allergy exists only on one side of

the family, symptoms generally occur in the child later but before the age of twenty. With no known heredity, symptoms may occur in or after the third decade. Heredity is not specific, but is one of capacity only. It is probably a dominant Mendelian characteristic.

Pathology

The pathology of allergic reactions manifests itself in many ways. Those conditions which show a skin sensitizing antibody, notably hay fever, asthma, urticaria, etc., are characterized pathologically by oedema and hypercontractility of smooth muscle. This oedema is further characterized by the presence of large numbers of eosinophils. However, allergy is a dynamic conception and therefore structural changes only occur as a result of long-continued allergic reactions; for example, emphysema in asthma. Thus the sensitized tissue reacts immediately by oedema and smooth muscle contraction when exposed to the antigen, and completely recovers when the antigen is removed.

Clinical Problem

The clinic problem in allergic diseases is to discover the agents to which the patient is reacting abnormally. Ideally treatment is designed to remove the patient from contact with the antigen. As this is not always practical, other measures of protection are necessary.

Antigenic agents may reach the patient in several ways: by inhalation (inhalants), by ingestion (ingestants), by contact (contactants). The above are all environmental or extrinsic factors. The patient may also be allergic to factors developed within his own body, that is intrinsic factors. Most commonly intrinsic antigens are products of chronic bacterial infection. This may occur anywhere in the body, but the commonest site is in the upper respiratory tract.

Clinically, allergic cases of the inhalant type are very numerous and important. Their chief manifestations are hay fever and asthma. A most important type of inhalant is pollen. As pollenosis will become important in the coming summer months, it is proposed to discuss it in the next issue.

Right Side Abdominal Pain—Appendicitis or "Bands"

W. A. Bigelow, M.D.

Reading the January issue of the Manitoba Medical Review, I became interested in the discussion of "A Pathological Summary of Seventy-five Appendices".

I would suggest the possibility that in many of these patients on whom the diagnosis of appendicitis had been made the major symptom was right-handed abdominal pain. If so, then we must consider the caecal and ascending colon bands (about which I have written several reports) as one of the most common causes of right-sided pain. We know that at least 90% of all cases of acute appendicitis start with the anatomical and legitimate pain localized and involving the autonomic nervous system. This pain, then, must be felt in mid-abdomen and epigastrium. We also know that these cases do not get the subsequent right-side pain until there is involvement of the parietal peritoneum, or of the peritoneum of the caecum and ascending colon, which is mainly supplied by the somatics. To prove this, over thirty years ago I removed several of the then so-called "chronic appendices" with novocaine, but, before injecting the appendiceal mesentery, I made traction of the appendix and its mesentery with forceps. I found that this produced not right-sided pain, but, instead, attacks of cramp-like belly ache referred to mid-abdomen and epigastrium, which came on in 3 to 5 minutes. In none of these cases was there any right-sided pain. I then drew down on the caecum and ascending colon, taking hold of the presenting bands with forceps, and found that the slightest tension on these bands produced the right-sided pain previously complained of. This is simply what one would expect anatomically.

I shall now make a short summary on this subject of Bands as a common cause, I might almost say the commonest cause, of right-sided pain in the lower abdomen.

Sommering in 1845, Virchow in 1853 and Treeves in 1885 wrote discussing the presence, and pathological anatomy, of the congenital membranes and Bands of the caecum and ascending colon. In 1898 Riedel, in four papers, reported cases of Chronic Appendix associated with colon membranes and Bands in which right-sided pain was manifest and that the removal of the appendix left the symptom of right-sided pain still persisting after operation.

Again, a German by name of Wilms, in 1908, called attention to the futility of removing the appendix when congenital membranes were present over the ascending colon, and for that reason advised leaving it alone.

Now, in order to find out the real results of the operation for removing these Bands as a cure for this right-sided pain, I have personally sent out several "Call-In" reports to ascertain the results of this operation done here by the different members of this Clinic since 1915, and by myself, and previous to 1915 back to the first operation done in 1909. My first "Call-in" report of these cases was in 1922. At that time 83 patients responded. Dr. Pierce, our pathologist, made sections of many

of these appendices removed during the Band operation and his reports showed no evidence of disease of the appendix.

In 1930 I issued a "Call-In" report on results of operation for removal of "Bands" and appendix. In 10 percent of these the appendix had been removed previously. I had replies from 520, of whom 489, or 94%, said that they had no further right-sided pain as complained of previously.

Again, in 1938 in order to find out definitely the real results of this operation), we sent out a "Call-In" report to 169 people on whom an appendectomy had previously been done and who still suffered from the same pain after the appendectomy. Replies came from 147 patients and, of these, 92 percent said they were completely cured of their persisting pain. The percentage of cures was really higher than 92 percent, because four patients came back, as requested, for further interrogation, and it was found that none of these four had had the same pain recurring. Two of them had had post-operative peritonitis causing adhesions. These were operated on and cured. The other two had neuralgia.

I have now a "Call-In" report ready for publication of 260 cases suffering from right-sided abdominal pain, on whom a previous appendectomy had been done to cure it. Of these, 93 percent report cure. We have had failures and these have been in cases where other abdominal work had been done at the same time. This, we believe, is rarely the right thing to do. Also in a few of these cases there developed a post-operative right-sided peritonitis with its subsequent adhesions. These complications, we believe, were caused by letting the patient up and about too soon.

The presence of these Bands can be demonstrated by the fluoroscope during a Barium Enema, but not by films.

The pain can nearly always be produced by the following maneuver. The patient lies extended upon the left side with the right arm lying above the head. The examiner stands at or below the patient's hips and with his right hand seeks to drag downwards and inwards the caecum and ascending colon. If the abdominal wall is well-relaxed and "bands" are present, the right-sided pain can be readily produced.

People with Bands also develop attacks of acute perityphlitis with temperature and caecal distention, with pain and soreness in right side with this one diagnostic characteristic—the pain started on the right side and not as a general abdominal pain. During the first three years of this war, Dr. Cromarty had a large number of cases sent in from the camps with a preliminary diagnosis of acute appendicitis. We waited until the perityphlitis subsided and then operated upon the "bands". In many no sign of a pathological appendix could be found.

In conclusion, I would suggest that, if the presence of these bands (not adhesions, as they are sometimes wrongly called) be carefully considered in the differential diagnosis, then we will reduce the percentage of undiagnosed cases and have fewer appendectomies.

* * *

Medical Events for April

Hospital Luncheons

Thurs., 5th, 12:30, Winnipeg General Hospital.
Tues., 3rd, 12:30, Grace Hospital.
Tues., 3rd, 12:30, Misericordia Hospital.
Thurs., 12th, 12:30, St. Boniface, Hospital.
Thurs., 19th, 12:30, Winnipeg General Hospital.
Thurs., 26th, 12:30, St. Boniface Hospital.
Friday, 27th, Victoria Hospital.
Tues., 24th, 12:30, St. Joseph's Hospital.

Tumour Clinics

Winnipeg General Hospital, every Wednesday at 9:00 a.m.

St. Boniface Hospital, every Friday at 10 a.m.

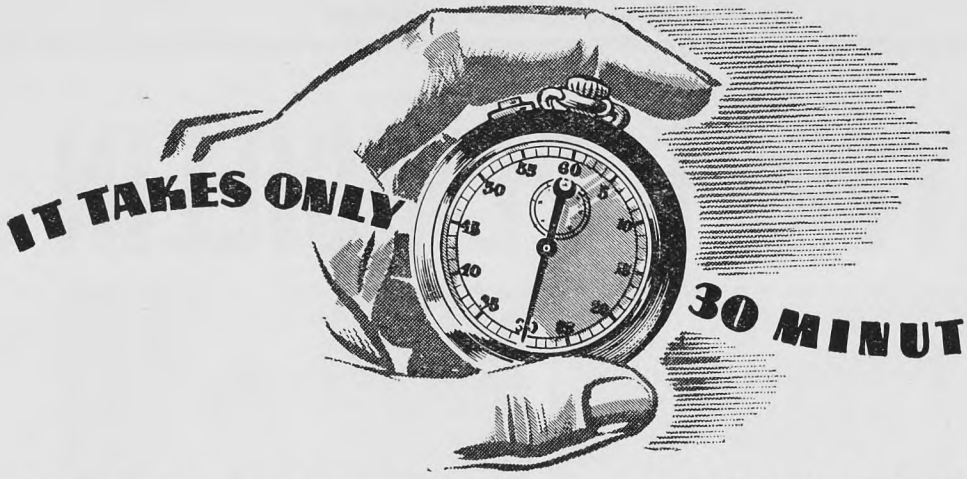
Winnipeg Medical Society

Friday, 20th, 8:15 p.m., Medical College.

Obituary

Dr. E. C. Barnes

Dr. E. C. Barnes, for over twenty-three years medical superintendent of Selkirk Mental Hospital, died suddenly at his residence in Victoria, B.C., on February 19. Born in Forrest, Ont., 66 years ago, he received his education at London, Ont., graduating from Western University. After practising in Ontario for three years he became assistant superintendent of Homewood Sanatorium, Guelph. In 1920 he took up his duties at Selkirk. One of his first efforts was to inaugurate a training school for nurses. In 1931-32 he was vice-president of Manitoba Medical Association, and for many years was a frequent attendant of the meetings of the Winnipeg Medical Society. He retired from his duties in Selkirk Mental Hospital in 1943 to reside on the Pacific coast. He is survived by his widow.



SCABANCA LOTION

A 30-MINUTE AMBULATORY TREATMENT FOR SCABIES!

NON STAINING - GREASLESS - AROMATIC - NON-SULPHUROUS

During the past seven years Scabanca Lotion has been used successfully as the MODERN treatment of scabies. Several hundred thousand cases have been treated. Clinical data has shown that in most instances a SINGLE TREATMENT has completely eradicated both acarus and nit. This Benzyl Benzoate Lotion is used extensively in the armed forces, public health clinics and in general practice, with consistently excellent results.

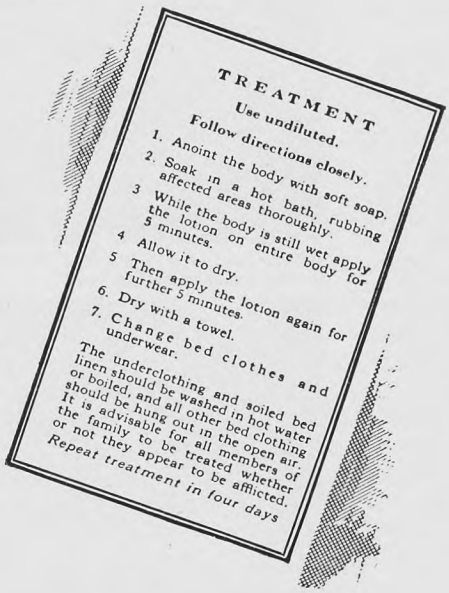
"It very seldom gives rise to any dermatitis or irritation of the skin, and even cases pyogenically infected, and very young children, can be treated without any serious after-effects . . . " (Kissmeyer, *The Lancet*, Jan. 2, 1937). "Of some 400 cases (school children) treated, not more than 12 have had the treatment repeated. . . . In no case have we had any dermatitis following this treatment." (D. V. Currey, *Can. Journal of Public Health*, June, 1939).

FOR COMPLETE TREATMENT

Adult requires 5 to 6 fl. oz.
Child requires 2 to 3 fl. oz. See ← our Catalogue, Page 33.

Facsimile of direction labels — Supplied with Scabanca for the convenience of the busy → dispenser.

Please write us for complete treatment clinical package. It is complimentary.



TREATMENT

Use undiluted.

Follow directions closely.

1. Anoint the body with soft soap.
2. Soak in a hot bath, rubbing affected areas thoroughly.
3. While the body is still wet apply the lotion on entire body for 5 minutes.
4. Allow it to dry.
5. Then apply the lotion again for further 5 minutes.
6. Dry with a towel.
7. Change bed clothes and underwear.

The underclothing and soiled bed linen should be washed in hot water or boiled, and all other bed clothing should be hung out in the open air. It is advisable for all members of the family to be treated whether or not they appear to be afflicted. Repeat treatment in four days

100 PER CENT CANADIAN

Anglo-CANADIAN DRUG Company

anca

LIMITED

100 PER CENT ETHICAL

OSHAWA CANADA

MANUFACTURERS OF FINE PHARMACEUTICALS

Western Depot—236 Edmonton St., Winnipeg

Clinical Luncheon Reports

St. Boniface Hospital

Injuries to the Parturient Canal

Dr. H. Guyot

Dr. Guyot discussed the injuries sustained during delivery. He dwelt especially upon lacerations of the perineum and illustrated his remarks by means of slides. He also told how many injuries could be lessened with care.

Episiotomy

In the second part of his presentation Dr. Guyot spoke on episiotomy as a means of protecting a threatened perineum. This 200-year-old operation has become increasingly popular during the last decade or so. Dr. Guyot described the technique and gave the indications—a rigid perineum, lesion of the vulva, large head, when rapid delivery is required or when a tear is unavoidable. The repair of the episiotomy was described and also illustrated by means of a moving picture in color. We cannot do justice to either of these subjects in a brief note, as the presentation was chiefly pictorial.

St. Joseph's Hospital

Hypernephroma—Dr. A. Guttman

A woman, age 59, complained of having had pain in the left shoulder joint for the past six months, due, she thought, to having caught cold while hanging clothes outdoors. The pain bothered her every day and seemed to be getting worse. She could not sleep at night. She was unable to work with the left hand, pain was aggravated on abduction of the arm. The last month she developed pain in the right shoulder, although the movements of the right arm were not affected.

In July, 1938, she was operated on for hypernephroma and had a course of deep X-ray therapy following the nephrectomy.

On examination the left shoulder joint appeared normal. There was definite tenderness along the left trapezius muscle. There was a mass four inches in diameter over the posterior aspect of the inferior angle of the left scapula. The mass was not adherent outside of the scapula and felt soft and tender. A Wasserman was not obtained. Blood calcium 11.3 mgm. per 100 cc. of blood. Dr. R. A. Macpherson gave the following report of the X-ray of the left shoulder: "There is a destructive lesion with slight amount of new bone formation involving the lower end of the scapula. The cortical bone is broken down, which would indicate that it is not a benign lesion. There is some osteoporosis of the upper end of the humerus, and the upper left ribs seen in these films are normal. Further investigation may be necessary to determine whether this is a single lesion or not. If a primary bone tumor, osteogenic sarcoma, or single myeloma would be the first consideration. However, the possibility of metastasis must be kept in mind."

Aspiration biopsy: "Smear shows blood clot and a few cells, but not enough for diagnosis." On the basis of history and X-ray findings a diagnosis of hypernephroma was made.

Hypernephroma is a rare tumor. Wright reports that during a period of 15 years and in 10,500 cases seen at the London Cancer Hospital there were only six hypernephromata. It so happens that there are three cases in our local hospitals at this moment. Hypernephroma is the most frequent of kidney tumors. It occurs chiefly in middle and later life. It metastasises to the lungs and especially to the bones, where the secondaries may be single or multiple, and these may be the first evidences of the growth. Solitary metastases are not infrequently misdiagnosed as primary bone tumors, because there are no radiographic features peculiar to hypernephroma. Metastasis is by way of the blood vessels, and there is a tendency for the tumor to grow in the renal veins and in the inferior cava.

The principal sign of hypernephroma is haematuria, which may be slight or profuse, intermittent or constant. Pain when it occurs is lumbar in site and vague and indefinite in character. Renal colic is rare. The tumour may or may not be felt. Fever is a striking feature. In active growths it may reach 103 and may be the only symptom. If the other kidney is functioning and there are no obvious secondaries the growth should be removed. A solitary metastasis also should be removed if possible. For cases with multiple metastases and cachexia there is no active treatment.

A word on pathology may not be out of place. Hypernephroma is a tumor of adrenal tissue usually occurring in the kidney and arising, it is thought, from adrenal rests. Boyd regards hypernephromata as renal cancers which show little evidence of malignancy for long periods but may at any time become actively malignant, and give rise to widespread metastases. When metastasis occurs it is chiefly to the lungs and the long bones. Spontaneous fracture may be the first sign of bone involvement.

Discussion, Dr. O. C. Trainor: Kidney carcinoma gives secondaries in the lungs. If the tumour breaks through its capsule then prognosis is bad.

Dr. R. A. Macpherson: Kidney tumours are radiosensitive; hypernephroma are less radiosensitive. In inoperable cases X-ray therapy is worthwhile; it may turn an inoperable case into an operative one. Metastases in the chest respond

well to radiation. In a case with metastasis after nephrectomy the secondary disappeared after radiation, and the patient is alive and well at present. Kidney tumours give rise to secondaries in the chest rather than in the bones. This raises the question of classification. True hypernephroma is really a rare tumour; carcinoma of the kidney is more common. At present there is another case of hypernephroma with secondaries in the scapula under treatment at the General Hospital. Dr. J. J. Lander quoted a case where the lesion in the lung disappeared after nephrectomy.

Dr. A. C. Abbott discussed the differential diagnosis of hypernephroma and kidney tumours by radiography. Usually kidney tumours are large. The largest unilateral tumour is usually hypernephroma. If the tumour is bilateral it is a polycystic kidney. Tuberculosis has to be considered in the differential diagnosis. "Cannon balls" in the lungs are suggestive of hypernephroma. In cystic kidney there are characteristic huge filling defects and dragging out of the minor calyces. Wherever there is a "hooking", "tailing effect" of minor calyces, kidney tumour should be suspected. On the other hand, there can be a fairly large tumour with the calyces appearing normal radiographically. One has to keep in mind a filling defect due to hemorrhage.

♦

Inhalation Burns—Dr. Wiebe

Dr. J. H. Wiebe presented a case of a man, age 73, who was admitted to the hospital by ambulance. The man received inhalation burns of respiratory tract due to fire. The patient had labored breathing and was complaining of pain and a burning sensation in the throat. He had a very irritating cough with copious secretion. Respiration 20, pulse 90, feeble, B.P. 160/100, urinalysis normal, R.B.C. 5,200,000, haemoglobin 96%; sputum, negative. X-ray of the chest was negative. Oxygen was given by nasal catheter, and morphine gr. ¼, atrophine gr. 1/150 was given hypodermically. He was also given 50 cc. 25% glucose intravenously, repeated three hours later. Eight days later the patient was discharged, feeling well. —A. L. S.

Victoria Hospital

Tuberculous Lymphadenitis—Dr. Walter Tisdale

The First Case

A man aged 50 with a negative past history had a tooth extracted. Three months following extraction he developed a swelling in the neck about the size of a wild plum. There was no redness or softening. X-ray showed bone defect. The gland was excised and the pathological report showed tuberculous lymphadenitis.

The Second Case

Boy, nine years old, had a carious tooth involving the mandible. A pea-sized lump was present in the neck, gradually enlarging to the size of a plum. There was moderate fluctuation in the mass and it became painful. The gland was removed and the pathological report was tuberculous lymphadenitis.

In the past, tuberculous lymphadenitis was relatively common. Due to better nutrition, improved veterinary services, etc., this condition is rarely encountered now. The diagnosis of tuberculous lymphadenitis is often difficult. If there is an enlargement in the region of a gland, a decision as to whether the enlargement is a gland or not has to be made. If it is a gland the question arises as to whether it is tuberculous or not. If the mass is large and soft, waiting for developments may help in the diagnosis. In a tuberculous condition the mass will remain the same or disappear. If malignant, the condition will progress. If the mass is hard, it is difficult to decide on the time for intervention, especially if it is thought to be tubercular. If the hard mass is due to a tuberculous gland the following events may take place: 1. The enlargement may recede. 2. Caeseation may develop and resemble malignancy. In the latter the capsule may break and spread to other glands, or break and discharge through the skin. 3. Calcification may develop.

Treatment

When glands become palpable treatment should be instituted. Medical treatment: 1, Rest. 2, Good hygiene. 3, Good diet. When caeseation occurs calcification may cure the condition. Surgical treatment in the past consisted of mass disection of glands with mutilation of patient. In treating these cases one must decide on radical or conservative treatment. Most men favor conservative treatment. On the other hand if one waits too long the capsule may break. Dr. Lederman mentioned that in a recent series of cases reported, 25% of cases of cervical adenitis were due to Bovine tuberculosis. Some were associated with a break in the mucosa of the mouth.

♦

Subacute Bacterial Endocarditis — Dr. A. W. Hogg

A woman, age 28, was admitted to the hospital on October 13, 1944, complaining of weakness and swelling of the left leg and both feet. In 1928 she had scarlet fever followed by acute rheumatic fever and was in bed for two years. There had been several recurrences of acute rheumatic fever since. Her tonsils were removed in 1928, and her appendix in 1942. In July, 1944, after having some teeth extracted, she felt ill and since then has had fever and afternoon chills once a week. In October she had the appearance of fairly good health but there

was marked pallor of the skin. Her pulse was 120, her blood pressure 120/80 and her temperature was of the swinging type, rising to 102 in the evening and falling to 99 in the morning. There were loud systolic murmurs in the apical, pulmonary and aortic areas. The spleen was enlarged. There were petechiae on the conjunctiva and skin of the abdomen. Urinalysis showed 100 red blood cells to the high power field. Blood examination, Hemoglobin, 51%; Red blood cells, 3,128,000; White blood cells, 8,385; Polymorphs, 60%; Lymphocytes, 21%; Neutrophiles, 8%; Eosinophiles, 2%; Monocytes, 2%; undetermined, 1%. X-ray of the chest showed a slight irregularity of the left diaphragm and slight changes in the left costo-phrenic angle suggesting some pleurisy. There was generalized enlargement of the heart, the transverse diameter being 16.5 cm. as compared to 28 cm. for the chest.

Beginning on November 24th, 10,000 units of penicillin were given intramuscularly every two hours for five days together with sulfadiazine gr.xv every four hours; this treatment was stopped November 30th for lack of penicillin. On December 2nd penicillin 10,000 units every two hours together with sulfadiazine gr.xv every four hours was started again and continued till December 16th. During the period between December 6th and 22nd the temperature was normal, the patient felt well and the heart murmurs became less intense. She seemed to be recovering but six days after treatment was discontinued, the temperature again became septic in type, signs of embolism reappeared, the anemia became more severe and the patient became worse. She died on March 1st from congestive heart failure.

Discussion by Dr. A. L. Shubin

Certain individuals are prone to subacute endocarditis. These usually have had a heart murmur for years and have enjoyed comparatively good health. It is rare in patients who have had chronic persistent auricular fibrillation, congestive heart failure or hypertension, but twenty to twenty-five percent of the cases with rheumatic valvulitis or with congenital defects succumb to subacute bacterial endocarditis.

Usually the condition is due to streptococcus viridans and the infection is initiated by a simple cold, sore throat, extraction of tooth or following tonsillectomy, local septic infection, post partum or postoperative. The onset is gradual, grippe like, and may resemble typhoid fever with malaise, anorexia, sweats and chills and gradually developing loss of strength and weight. The fever is of the swinging type 98—99 in the morning and 100—103 in the evening. The clinical findings are chiefly the result of emboli from the heart valves and include petechiae, splenic enlargement, red blood cells in the urine, clubbing of the fingers and painful finger tips. A positive blood culture is very important and cultures should be taken on three successive days, usually during the phase of low body temperature just prior to the anticipated rise. The petechiae are small oval hemorrhagic areas ½ mm. in diameter with a grey or white centre. They are commonly found in the conjunctival sac, the mucous membrane of the mouth or on each side of the neck, but may occur anywhere over the body.

The course is a downhill one. It may be altered by a peculiar accident, rupture of a valve, rupture of the interventricular septum or by a gross cerebral embolus, or embolus into the coronary arter. Ordinarily the course is slow, wasting and anemia increase, heart failure supervenes or glomerular nephritis with uremic manifestations brings about the end. In the differential diagnosis tuberculosis may be suspected because of fever and sweat; typhoid because of spots on the skin and an enlarged spleen, and rheumatic fever because of a heart murmur, fever, and vague pains. One of the stronger points against the diagnosis of subacute bacterial endocarditis is the absence of a heart murmur. In rheumatic fever the heart rate is apt to be more rapid in relation to the degree of fever than in the bacterial infection. Anemia is more marked, leucoytosis may be absent and salicylates do not alter the picture in subacute bacterial endocarditis. Pancarditis, arrythmias and alteration in the E.K.G. are common in rheumatic and rare in bacterial infections. In eighty to ninety percent of rheumatic fever cases dead cultures of streptococcus hemolyticus or streptococcus viridans or the split protein products of these germs when injected intracutaneously will give a positive reaction in twenty-four hours. In subacute bacterial endocarditis such tests are negative. Fifty percent of normal individuals and 10% of rheumatic cases are also negative. Emboli and positive blood cultures are good evidence of subacute bacterial endocarditis. The co-existence of acute rheumatic fever and subacute bacterial endocarditis has been diagnosed clinically and confirmed at autopsy.

Treatment

Sulfonamide therapy is good as a prophylactic measure before, during and after dental extraction and following tonsillectomy in patients known to have valvular defects or congenital heart lesions; a transient bacteremia occurs after such surgical procedures and the prompt destruction of the micro-organism in the blood stream will prevent the development of subacute bacterial endocarditis. Sulfadiazine with an equal amount of sodium bicarbonate is given approximately 10 hours before the planned operation with an initial dose of two grams by mouth, followed by four one-gram doses at intervals of four hours. The sulfonamide compounds are at times capable of causing the destruction of the micro-organisms in the peripheral blood. The action is bacteriostatic rather than bactericidal,

thus blood cultures may be sterile for several weeks, only to have the bacteremia return with renewed vigor when the drug action has passed off. The sulpha drugs cannot reach or destroy the micro-organisms resident in the cardiac vegetations.

The combined use of the sulfonamide compounds and anticoagulants such as heparin and dicumarin has not proved encouraging. Their use in hazardous. Hyperthermia produced by intravenous injection of typhoid vaccine alone or combined with sulfonamides has been unsuccessful. The most valuable addition to therapy is penicillin. In the Lancet, March 27, 1943, Florey reported the first case treated by penicillin. There was marked clinical improvement during the time of administration, but the end result was bad. Keefer in the J. A. M. A., August 28, 1943, gave a very discouraging report. On the basis of that report, the committee on penicillin opposed its use in cases of subacute bacterial endocarditis. Dawson, February 1, 1944, reported that there was a definite improvement in several of his cases and in one there appeared to be a definite arrest. Lowe in the J. A. M. A., January 15, 1944, reported the results of treatment of cases with penicillin and heparin combined, in which there were seven consecutive successfully treated patients. MacNeal reported the apparent complete success in one case and in several others treatment was progressing very satisfactorily. There are conflicting opinions concerning the use of heparin with penicillin.

There is evidence that penicillin is bactericidal as well as bacteriostatic. It has been shown, however, that the drug fails to sterilize cultures completely, and that one to four percent of the organisms survive, hence the combined use of penicillin and sulfa may give better results. At Peter Bent Brigham Hospital, Levine uses the following method: The bacteria are tested for strain and penicillin susceptibility in vitro. If the organism is susceptible to pencillin then 30,000 units of penicillin in 5% glucose is given every two hours, intravenously, intramuscularly or subcutaneously. Intravenous and intramuscular injections are preferable. Sulfadiazine or sulfamerazine 6-9 gm. per day with 12-15 gms. of soda bicarbonate is given at the same time. When blood cultures are taken during treatment, clarase is added to the culture to eliminate the local bactericidal effect of penicillin. This treatment is not stopped until the blood culture is negative and temperature, pulse rate and sedimentation rate are normal. It takes about 400,000 units of penicillin daily for two weeks to get the desired result. Whole blood in small quantities is given so that the blood count is kept at the normal level or as near to it as possible. The immediate results at Peter Bent Brigham Hospital were very good.—A.L.S.

Winnipeg General Hospital

Dr. F. G. McGuinness, the new chairman of the Honourary Attending Staff, welcomed the following: Col. Harry Lewis, Col. Edwards, O.C. of Fort Osborne Hospital, Major George Ferguson (on leave) and Capt. Don Hastings. All these gentlemen are R.C.A.M.C

Stevens-Johnson Disease — Major Harry Medovy

Major Medovy has had seven cases and he reported two in detail: Sudden onset, chills, fever, sore mouth, reddish-brown rash appears in two to three days; this rash may be macular, vescical or papular. All mucous membrances may be involved, including the mouth, rectum, conjunctiva and genitalia. Apparently this so-called disease has been described by Osler and by a number of other writers—may be called dermato-stomatitis, Basay's syndrome, etc. There is no constant pathogen. Patients are very sick, run a fever for ten days, leucocytes run from 10,000 to 14,000. The sulfa drugs have apparently no effect; not sufficient Penicillin has been used to evaluate its work. Good nursing care, use of oxygen and blood transfusions is the best known method of treatment.

Case History: Soldier, aged 19, underweight, sore throat, fever, malaise. The provisional diagnosis was Vincent's Angina. (Vincent's Angina is usually confused with Stevens-Johnson Disease). The mouth was covered with bullae; there were also lesions in the eye, body and genitalia. He was given 500 c.c's. of blood. An X-ray of the chest the day after transfusion showed basal lesions in both lungs. Another transfusion was given and a variety of streptococcus was found in the blood of the patient. The patient was given Penicillin, 100,000 units daily for a week—good recovery.

Second Case: Mild one, with a relapse in a month's time; symptoms were greatly increased. This second attack the patient was given oxygen and blood transfusions, with good result.

Discussion: Dr. A. R. Birt mentioned that Rendu, a French military surgeon, described this condition, Stevens-Johnson Disease, in 1902 and called it erythema multiformae. Dr. Birt cautioned to watch out for drug rash, especially phenolphthalein; it might be confused with Stevens-Johnson Disease.

Dr. C. H. A. Walton gave a report of nine cases overseas. He mentioned the fact that he looked through the literature and had difficulty in placing the symptoms under any known disease. They started off with a provisional diagnosis of pneumococcal stomatitis. Dr. H. M. Speechly brought up the question of confusing it with scurvy. Both Dr. Walton and Major Medovy said that this factor had been taken into account and the patients were getting adequate diets for the prevention of scurvy.

Stevens-Johnson Disease takes its name from two pediatricians in New York who described this condition in 1922.

Pancreatico-Duodenectomy

Dr. P. H. Thorlakson, Dr. Frank D. White

Dr. Thorlakson showed a patient with a fistula from the pancreas which secretes as high as 1,800 c.c's of fluid in 24 hours. Dr. Thorlakson discussed the value of one or two stage operation; he favors the one stage. He thinks that these patients should be operated on early, that is as soon as a diagnosis can be made, and stressed the necessity of using silk sutures so that the pancreatic secretion will not dissolve the cat-gut. Dr. Thorlakson also discussed slightly the significance of jaundice in pancreatic disease.

Dr. Frank White presented the biochemistry of pancreatic secretion. In the analysis there was amylase plus lipase with trypsin doubtful. Dr. White showed a graph of the 24-hour intake of the patient with the pancreatic drainage of a like period. He quoted from literature twelve cases of pancreatic fistula; five followed drainage of pancreatic cysts, four followed surgery, and three were traumatic. Dr. White gave details of the essential fluid balance, electrolytes and sodium ions. With the loss of 1,800 c.c's of fluid daily from a pancreatic fistula one can readily see the loss of sodium ions, electrolytes and body protein. It has been shown that if a patient gets sufficient sodium ions, plasma protein and electrolytes over a considerable period of time these fistulae may heal spontaneously.

Case: Mrs. P. S. Aged 42. Admitted December 2, 1944.

Entrance Complaints: Jaundice since August 16, 1944. Itchiness. Loss of weight—28 lbs. Soreness in epigastrium. Clay colored stool.

Physical Examination: Patient deeply jaundiced. Abdomen—slight tenderness in L. U. Q.. Liver not enlarged. Gall bladder not palpable. Temperature 104. Pulse 80-90.

Tests

Urine—negative, except for bile. Blood Count: R. B. C.—3,730,000. Leucocytes—13,000. Icterus Index — 42. Duodenal Drainage — Culture: Gall bladder and liver—negative. Duodenum—Haemolytic Streptococcus. Blood Culture—negative. Stool —negative for bile.

Pre-operative Diagnosis: Obstructive Jaundice with Cholangitis.

Operation December 12, 1944: Cholecystostomy. Large gall bladder and common duct. Tumour in second portion of duodenum. No stones.

Cultures of bile: Haemolytic streptococcus. Icterus Index—20. Penicillin given—510,000 units.

Operation January 3, 1945: Pancreatico-duodenectomy for carcinoma ampulla of Vater.

Laboratory Work

Plasma chlorides—61 gms. per 100 c.c's. Plasma proteins—normal. Faeces—Water 67%. Fat 41% dry weight. (Normal 25.)

Microscopic examination of specimen: Papillary adenocarcinoma of duodenal or duct origin — grade 2.

♦

A Case of Subacute Bacterial Endocarditis on Treatment With Penicillin, Administered by the Intramuscular Drip Method

Dr. F. G. Allison

Dr. Allison presented a young man, aged 19, who had had rheumatic fever in childhood. He was to have a tooth extraction about a year ago, and being cognizant of the danger of infection, received local treatment to his mouth and sulphapyridine intravenously before the extraction. For ten days he was running a temperature and suffering general malaise. Blood culture taken at this time was positive in 48 hours. He was given heparin and penicillin as described in C.M.A.J. January, 1944, receiving 100,000 units of penicillin for 18 days. Although blood culture was negative his temperature remained elevated—101° all the time. Because of cost, difficulty in obtaining, and lack of apparent improvement, this was discontinued and he was given sulphadiazine and Dicumeron. Temperature fell to 100°—99.4°, and was normal in ten days. He was discharged from hospital and in a short time was back at his office work.

In January, 1945, his haemoglobin was 56% ((previous 96%), in spite of iron medication, and he complained of abdominal pain, vomiting and temperature. Temporary diagnosis of mesenteric thrombosis was made, and he made a good recovery. He was seen again on February 17th; temperature was 101° and he was a toxic, sick man. Blood culture was positive again. He was started on penicillin by the continuous intramuscular drip method, this time according to apparatus and method in Lancet, October, 1944. His temperature has gradually fallen to normal and blood culture is negative. Yesterday he had pain in the palm of his right hand; today there is a blueness—evidently a small embolus. So far it is too early to be sure, but he is definitely improved.

The speaker has seen six cases of subacute bacterial endocarditis follow tooth extraction in the past three years. Blood cultures have been found to be positive in 10 minutes following extraction—so in congenital or acquired new disease, watch out for trouble and take energetic steps to avoid it, such as:

(1) Local treatment to mouth and tooth for one week previous to extraction.

(2) Paint gums and surrounding tissue with iodine.

(3) Give 40,000 units of penicillin half an hour before extraction and 100,000 units every hour for three or four hours after extraction.

The advantage of the continuous intramuscular drip method are:

(1) Maintains continuous presence and even level of penicillin in blood at all times.

(2) Less painful to patient .

(3) Nursing care considerably lessened.

An interesting discussion followed, Dr. Bell and Dr. Hunter giving their comments.

A Suggested New Design for the Intramuscular Drip Apparatus

Dr. Harold Rice

Dr. Rice presented in his own inimitable way a new apparatus of his own design for the continuous administration of intramuscular penicillin which would be:

(1) Accurate.

(2) Easy to sterilize.

(3) Lessen nursing care and interne attention.

(4) Would not depend on gravity and air inflow.

The apparatus was enthusiastically received and created much interest.

A Case of Pseudomyxoma Peritanei

By Brian D. Best, M.D.

Mayo's report thirty cases in 18 years.

Pittsburg reports three cases in 20 years.

It is characterized by pseudomucinous material in the abdominal cavity. This material re-accumulates and the patient dies a slow death from either exhaustion, intestinal obstruction or infection.

It was first described by Werth in 1884, and it is on record that a surgeon in twelve operations removed 350 pounds of this pseudomucinous material, and the patient lived to an age of 75 years. The material arises from a leakage or rupture of a pseudomucinous cyst of the ovary or appendix. The detection of palisade cells is characteristic of this condition.

Case History

Mrs. B., aged 59, married, with six children, had loss of weight and precordial pain, both of six months' duration; no symptoms pertaining to the abdomen. Blood pressure was 135/95. There was a mass the size of a grapefruit in the lower abdominal quadrant. On bimanual vaginal examination there was a delayed pressure transmission; Dr. Best stresses this sign in pelvic examination. Blood examination was normal. Sedimentation rate was 62 mms. normal 5 - 10 mms. in one hour).

On February 2, 1945, the patient's abdomen was opened: Glairy, viscid, jelly-like matter filled the peritoneal cavity. There was a mass the size of a grapefruit on the left ovary and a cystic mass the size of a golf ball on the right ovary. The visceral peritoneum was reddened and implanted on it were bladder or tapioca-like implants. The abdomen was closed with no drain. Those taking part in the discussion were Drs. Dingle, Nicholson, Burrell and MacCharles.

Review of Sarcomas Presented at Tumour Clinic

(Excluding Lymphomas)

Dr. D. W. Penner and Dr. M. Kiernan

Seventy-Four Cases of Sarcoma from the Tumour Clinic Records of the Winnipeg General Hospital

	Neuro-sarcoma	Osteogenic sarcoma	Muscle sarcoma	Fibro-sarcoma
Number of cases	10	24	11	26
5 year survival	3	6	2	4
Favorable for radical surgery	6	12	....	16
Average age	42.7 yrs.	35 yrs.	46.5 yrs.	35 yrs.
History of trauma	3	10	1	6
Site of Tumour:				
Thigh	....	....	4	7
Arm	....	....	2	....
Uterus	....	....	2	....
Femur	....	8	....	....
Pelvis	....	3	....	....
Humerus	....	3	....	....
Back	....	....	....	3
Cervix	....	....	....	2
Breast	....	....	....	2
Others	....	10	3	12
Deaths	7	10	8	13

Four per cent. of the patients attending the Tumour Clinic were sarcomas. Radiation treatment appears unsatisfactory. More and earlier results with radical surgery have not been completely evaluated. A man from New York has said that early amputation has not been completely justified; he advocates extensive radiation with local excision. An intelligent biopsy is well worth the added risk. Foote of the Memorial Hospital suggests radiation is not satisfactory and radical surgery probably offers the best hope of five-year cures. Coley in an article on sarcomas suggests that sarcomas in the phalanges of the toes does not need so radical treatment as long bones.

♦

Winnipeg Medical Society—Notice Board

P. H. McNulty, President
A. M. Goodwin, Vice-Pres.

Next Meeting
Friday, April 20th

W. F. Tisdale, Secretary
E. S. James, Treasurer

The Meetings

Everyone who has addressed a meeting knows how inspiring it is to have a full house before him. Conversely empty seats are depressing in proportion to their number. Usually nothing personal is meant by absence but there is something very personal in attendance. It gives encouragement to the speaker and shows appreciation of the time spent in preparation. The March meeting did not, unfortunately, have the attendance it deserved. In part this was due to other attractions. The date of our meeting is fixed and leaves anywhere from 27 to 30 days for other affairs. Dances, committee meetings and private entertainments can surely be arranged to fall on other nights. The evening of the third Friday belongs to us and every effort is made to make that evening pleasant and profitable. Everyone who can do so should attend the meetings of the Society. Those who have spoken should do their listeners the courtesy of listening in turn. Those who have not yet spoken should attend as they would have others do when they themselves speak. Age should be there to instruct youth and youth should be there to receive instruction. The president, the programme committee, the executive, the speakers, all see censure or encouragement in the number of the audience.

♦

Bills and Quacks

The therapeutic situation in Manitoba isn't what it might be according to some people. There is a number who prefer a doctor who is free from the contamination of scientific knowledge. One who is familiar with the writings of authorities on "natural methods" can see how difficult it would be for them to practice if they had to confine themselves to the ordinary facts of anatomy, physiology, pathology and bacteriology. The trouble with cults is that they are practically divine revelations and, therefore, like the laws of the Medes, incapable of being altered. Medicine being definitely human keeps advancing but how can chiropractic, for example, advance? Can a stream rise above its source? Can chiropractic rise above the level established by "Fountain head" Palmer?

The Basic Sciences Bill recently introduced in the Legislature is a sensible one. It merely demands, in the public interest, that those who profess to heal sick bodies should prove that they know what a body looks like from the inside. Likewise, if they undertake to keep ticking a person who threatens to stop ticking, they should know what makes him tick in the first place. Furthermore, if one says he can cure cancer and tuberculosis he should have more than a rough idea of what these diseases are, and not even a schoolboy these days would say of bacteria "Thar aint no sich critters."

Perhaps it is the season that stirs the chiropractors each year at this time. To misquote Solomon: "The time of the singing of birds is come and the voice of the quack is heard in the land." Ducks and chiropractors get going about the same time.

Many people won't believe that the doctors really want to protect the public, and they say the public feel quite able to protect themselves. All these bills are merely attempts to put the chiropractors out of business so that things will be better for the M.D.

Now let us make a suggestion. Let us give our unorthodox, illogical and irregular friends a chance to prove their case. Do you agree, Mr. Chiropractor, that animals like man have lungs, hearts, kidneys, muscles, nerves, backbones, etc.? Do you agree that horses, for example, get tumours, encephalitis, etc., just as men do? (You can't deny that.) Do you not say that you cure these and other diseases by appropriate spinal manipulations? Then why not try your methods on a horse? To be sure, I see certain mechanical difficulties. A horse is rather a "hefty" customer and besides it has "horsesense" which alone would distinguish it from many of your human customers. Let us, then, take that trusting and faithful animal, the dog. Find out what vertebrae are out of place when a dog has distemper and show that you can cure it. If you can do that you can add to your shingle "Good for man and beast" and all the dog lovers in Manitoba will weigh you down with gold.

Meanwhile, in case my information is wrong, will some one tell me the names of the chiropractors who discovered salvarsan, insulin, sulphanilamide, penicillin? Which of them is responsible for the ideas that have made typhoid and tetanus unknown in this war? I've never heard a satisfactory explanation, on a chiropractic basis, for venereal disease or, for that matter, for any disease, but would a chiropractor treat syphilis by spinal adjustments? If he doesn't he is not true to his faith. If he does, his patient remains a public danger. Ah me! Poor chiropractor! What a job he has in bringing his hocus-pocus in line with medical facts. But try it on your pup, brother, and if it works, let us know.

J.C.H.

Something Old

Doctor Cheyne and Medical Courtesies

Dr. George Cheyne, a physician of considerable eminence in his day, was born in Aberdeenshire, and educated at Edinburgh under the celebrated Doctor Pitcairn. After a youth passed in severe study and prudent abstinence, Cheyne came to London with the determination of entering upon practice. On his first arrival, being a stranger, and having to make friends, he was compelled to conform to the general style of life, which was to be described as free. The consequence of the sudden change from abstinence to epicurean indulgence was that Cheyne increased daily in bulk, swelling to such an enormous size that he weighed no less than 440 pounds! With this increase of size came its natural concomitants, shortness of breath, and a crowd of nervous and scorbutic symptoms. In this deplorable condition, having vainly exhausted the powers of medicine he determined to try a diet of milk and vegetables, the good effects of which speedily appeared. His size was reduced almost to a third, and he recovered his strength, activity and cheerfulness. By a regular adherence to his regimen he lived to a good age dying at Bath in his seventy-second year.

On the publication of his "Essay on Health and Long Life" Winter, a well-known physician of the period, addressed the following epigram to Cheyne:

Tell me from whom, fat-headed Scot,
Thou didst thy system learn;
From Hippocrate thou hadst it not,
Nor Celsus nor Pitcairne.
Suppose we own that milk is good,
And say the same of grass,
The one for babes is only food,
The other for an ass.
Doctor! one new prescription try,
(A friend's advice forgive)
Eat grass, reduce thyself and die,
Thy patients then may live.

To which Cheyne made the following reply:

My system, Doctor, is my own,
No tutor I pretend;
My blunders hurt myself alone,
But yours your dearest friend.
Were you to straw and milk confined,
Thrice happy might you be,
Perhaps you might regain your mind,
And from your wit get free
I can't your kind prescription try,
But heartily forgive;
'Tis natural you should wish me die
That you yourself might live!

—Chambers "The Book of Days."

Something New

The serum salicylate level is depressed by sodium bicarbonate, which either prevents absorption from the bowel or hastens its renal excretion. Inasmuch as the successful treatment of rheumatic infections depends upon a high level of salicylate in the blood, the simultaneous administration of sodium bicarbonate is undesirable. Gastric discomfort can be avoided and the full action of the salicylates secured by prescribing sodium salicylate in enteric coated tablets.

♦

"B" as in Beer. **A pint of beer** furnishes the daily requirement of niacin and from a third to two-thirds of the daily requirements of riboflavine.

♦

In Trigeminal Neuralgia, the use of niacin intravenously in doses of 100 to 200 mg. resulted in the cure of four patients and the relief of three out of a total of eight cases so treated. The injections were given daily. Cure or relief extended over months. The originators of this treatment are two Portugese physicians—D. Furtado and V. Chicorro of Lisbon.

♦

A United States Army officer—Robert Hubata—has found a simple way of determining whether or not a patient has been taking a sulpha drug. He takes a blank piece of newspaper, moistens in with the patient's urine, adds a drop of 1 in 4 hydrochloric acid, and, **if a sulphonamide has been taken,** observes the appearance of a yellow orange coloration.

♦

Bed sores are due only partly to pressure. Another factor is protein deficiency and, when this deficiency is made good, healing is hastened. Mulholland of New York states that in 8 patients the reversal of a negative to a positive protein balance by a carefully controlled diet resulted in healing of the sores as well as improvement in other ways.

♦

Sakharian of Moscow treats **blood transfusion shock** by lumbar novocaine block. From 100 to 200 cc. of 0.5% solution are injected on each side. Half these amounts of a 0.25% solution on one or both sides "produce a mild beneficial effect upon the whole vegetative nervous system."

♦

The treatment of burns by the topical application of horse serum is recommended by Rabinowitz and Pelner of New York. They used this method in the treatment of 54 cases of second and third degree burns. Infection and pain were absent and epithelization was rapid. There was scarcely any scarring.

Editorial

J. C. Hossack, M.D., C.M. (Man.), Editor
R. B. Mitchell, B.A., M.D., C.M. (Man.), F.R.C.P. (C), Associate Editor

This Issue

The present issue of the Review is the largest we have ever published. It is, moreover, the first to be illustrated in color. We owe a debt to our contributors. Every contribution in this number, and especially that of Dr. Peikoff, deserves the wider publicity of a larger journal. It is only natural that an author, having gone through the pangs of literary parturition, should wish his offspring to be seen by the largest possible number. That he should modestly show it only to his immediate circle is flattering to that circle. The circle is, however, larger than you may suppose. It includes all the Dominions, for copies of the Review reach everyone of them, as well as libraries in Great Britain and the United States. Recently we were gratified to receive a request from the Ulster Medical Society to send them the Review on an exchange basis. The Review is thus a silent messenger which tells doctors in many places how we practice in Manitoba. We want to give these faraway readers a good impression and such an impression they will continue to receive so long as our contributors favor us with thoughtful and well-prepared articles. The Review, I believe, can play a large part in the development of Manitoba Medicine. Our geographical position, our outlook, our training, our tradition so far as we have one, all of these tend to make for a Manitoba "School" — something distinctive and peculiar to ourselves. Let the Review be the expression of that fact .

♦

Allergy and Radiology

Beginning with this issue we are running a series of articles on Allergy and Radiology. Allergic phenomena, of one sort or another, occur in about 50% of the population. Thomas puts the figure higher. It is, however, a question if the thought of allergy occurs with any such frequency in the consideration of diagnosis. That being so it is obvious that many cases are missed and that a fuller knowledge of the subject is necessary if practitioners as a whole are to be in a position to do for their patients all that should be done. In order, then, to bring the matter closer to their attention we are submitting this series of papers to our readers. Both Dr. Walton and the Editor are anxious that everyone with a problem or with a question on the subject should send it in. The difficulty of one is likely to be the difficulty of many and the answering of such questions in print may make the series of greater value to all.

All of us use the X-Rays and many of our readers have apparatus of their own. Dr. Edmison feels that there are many points about radiology that could with profit be set forth and discussed. His object is to make the subject more clear and to show how best to get the maximum of assistance from this essential method of investigation. Here again correspondence will be welcomed.

♦

The Vancouver Section

I have it from what may be referred to as "a usually reliable source" that former members of this Society, now living in Vancouver, mean to apply for admission as a Section. I understand that commodious meeting quarters have been found in a down-town building which they will share with the Liquor Commission. This site was chosen because the prospective members have occasion to visit it each month in the enjoyment of their lawful privileges and therefore it was considered the most fitting place for the combining of business and pleasure. The suggested procedure is that the meeting begin with the reading of the Scriptures. The reason for this is the fact that most of our former colleagues are ageing and decrepit, which is, of course, the reason why they went to the Coast in the first place. It is proper, then, that they should show some concern about the state of their souls. This being disposed of, the members will then take turns in reading aloud articles from the current "Review," the authors, matter and manner of each being adequately discussed. The "Social Page" will be amplified with such additions as rumor or recent visitors can supply. Local gossip will be attended to at this time. Some time will be devoted to the consideration of Bridge and Golf, the only games our friends are now capable of playing. The meeting will conclude by the members heaving three huge sighs because they can no longer live in Winnipeg; they will then quietly drain their cups and pass silently into the fog. So far the Executive have not received the expected application, but when it arrives, it will be given careful and, I am sure, favourable consideration.

♦

Correction

On page 51 of the February issue mention was made that abdominal paracentesis is indicated if 200 cc. can be obtained. This should have read 2000 cc. There was also an omission of the last sentence of the article which reads: "Inhalation of oxygen is of value in congestive heart failure."

Gratifying Relief in "Sore Throat" with Aspergum

When the patient chews Aspergum a soothing flow of saliva laden with acetylsalicylic acid is released. Thus effective analgesia is brought into *immediate and prolonged* contact with all pharyngeal areas, including those often not reached by gargling or irrigations.

Moreover, chewing provides a gentle stimulation of surrounding muscles, helping to relieve local spasticity and stiffness, promoting tissue repair. The patient is more comfortable, willingly assumes a suitable diet earlier: convalescence is hastened.

Indications for the use of Aspergum:

1. **Post-tonsillectomy care**
2. **Acute and chronic tonsillitis, pharyngitis, "sore throat" of influenza, "Grippe", etc.**
3. **Acute coryza (with accompanying pharyngeal irritation)**
4. **Non-specific upper-respiratory infections**

Aspergum is available in packages of 16, moisture-proof bottles of 36 and 250 tablets.

Ethically promoted—not advertised to the laity. In boxes of 16 and moisture-proof bottles of 250 tablets. Write for samples and literature to White Laboratories of Canada, Ltd., Toronto, Canada.

Dillard's Aspergum

Manitoba Medical Service

P. W. Dawson, Associate Director, M.H.S.A., attended in March, Hospital Service Plan meetings in New York and Toronto. He met a number of executives administering Medical Plans. I have asked him to report points of interest.

Twenty - two non - profit medically - sponsored Medical Service Plans are now in operation. The Medical Associations of seven other States expect shortly to offer their Plans. Prepayment of medical services will then be available to 100,000,000 people of this continent.

Organization of these Plans in their relationship to Hospital Service Plans shows four types:

1. Separate corporations and separate management with no co-ordination. Such Medical Plans have met with little success for reasons which are obvious.

2. Two corporations, each with its own executive officers, but co-ordinated for acquisition and administration. The M.M.S. conforms to this type.

3. Two corporations with one executive officer. This carries co-ordination one step further.

4. One corporation and one executive officer. The latest organized Plans follow this type, and show the trend toward closer relations and greater economy in operation.

At a recent conference of Medical Plans in Chicago it was decided to organize a Council of Medical Service Plans, to serve the Plans as the Hospital Service Plan Commission serves Blue Cross. An assessment of 1¼ mills per contract per month will be levied to maintain its activities.

It has been suggested as an alternative that a Health Commission should be formed to co-ordinate activities at the international level. This to consist of 25 members: Five appointed by the American Hospital Association, five by Blue Cross, five by the American Medical and the Canadian Medical Associations, five by the Medical Service Plans, and five appointed by these 20 to represent the public.

Such a Commission would serve as a clearing house of Plan information, statistical, actuarial and promotional; undertake research and studies of problems impossible to individual Plans because of their cost; keep each Plan informed on trends, experiments and solutions to individual problems.

At the outset the cost would be borne largely by Blue Cross; but without an increase of present assessments. Economies through avoidance of duplication of offices and trained staffs offer possibilities of service to Medical Plans at a nominal cost.

Further information will be given by Mr. Dawson in the next issue.

There are now over ten thousand members, of whom more than 75% have taken complete service, Plan B. Administrative costs were 22.94% for January, and 16.41% for February. These figures are very moderate for an organization in its early stages, and this favorable condition is undoubtedly due to the skill and experience that we have been able to utilize through association with the Manitoba Hospital Service Association. Medical Services, which signifies payment to doctors, was 127.19% of income for the first month of the year, and 118.68% for February, which means that our loss in January was 41.06% and in February, 35.09%. The first three months in the year are usually the hardest for the M.H.S.A., and we may expect the same experience.

The Board of Trustees has laid down regulations as follows to meet certain problems:

(a) Fees for pre- and post-natal supervision of normal pregnancy are $2.00 and $2.50. Physical examination fees of $5.00 will not be paid in these cases. For General Practitioners the confinement fee includes provision for six pre- and one post-natal examination.

(b) Fees for diet regulation in addition to the fee for examination of children will not be paid, as this service does not differ from the advice or prescription that the adult receives from his doctor.

(c) For "concussion" in members who hold the "A" plan, lumbar puncture will not be regarded as a surgical procedure.

(d) Laboratory work done in a specialist's office is not entitled to the 25% increase.

(e) Electro-cardiograms are being assessed at $5.00 until the M.M.S. receives an official schedule.

(f) As some 1,100 doctors' bills have to be coded and assessed by the 10th of the month, writing to you with regard to reductions in your account will delay your cheque for at least a month, and only a small number of doctors can be contacted by telephone; presently a form similar to that used by the Workmen's Compensation Board will be prepared. One hundred and fifty-seven cheques were mailed to doctors for January services.

(g) Laboratory fees will have to be reduced. The present scale was based on the doctor doing tests himself; but many doctors employ technicians, others have them done at a flat monthly rate by a pathologist. The matter has been drawn to the attention of the fee committee of the Manitoba Medical Association for action.

E. S. MOORHEAD, M.B.,
Medical Director.

Personal Notes and Social News

Dr. and Mrs. D. W. Hunt are happy to announce the birth of a son (Brian Douglas) at St. Boniface Hospital, on March 1st, 1945.

Dr. and Mrs. S. E. Bjornson, of Arborg, Man., announce the engagement of their only daughter, Jona Marion, to Benedict Verne Benedicton, younger son of Mr. and Mrs. G. Benedicton, of Wynyard, Sask. The wedding to take place April 7th, 1945.

Dr. Neil John MacLean was reinstated as Chieftain of the Clan MacLean of Winnipeg at the second annual dinner meeting of the association on March 23rd.

Dr. Benjamin Duke Sutter, son of Mr. and Mrs. C. B. Sutter, of Redvers, Sask., is to be married April 5th to Margaret Thomson, youngest daughter of Mrs. D. McInnes.

Captain Joseph C. Portnuff, R.C.A.M.C. (overseas), has been awarded the Military Cross for gallantry in action in the Italian theatre of war.

Dr. John Alexander McNeill, oldest son of Mr. and Mrs. H. A. McNeill, of Brandon, Man., is to be married to Patricia Ruth, second daughter of Mrs. C. McAlister, of Beausejour, Man., on April 2nd, 1945.

Captain Arthur Leonard Jacobs, R.C.A.M.C. (overseas), of Brandon, Man., has been promoted to the rank of Major.

Major Ian MacLean is now in charge of No. 28 Canadian General Hospital, formerly No. 1 Canadian Field Hospital.

Dr. Arthur Gonty, formerly of Elm Creek, Man., is now located at Carman, Man.

Dr. E. J. Ryall, formerly of Carman, Man., is now located in Winnipeg, at No. 1 Florence Apts.

Dr. C. R. Scribner, formerly of Antler, Sask., is now located at Teulon, Man.

Captain George M. Black, R.C.A.M.C. (overseas), of Strathclair, Man., has been promoted to the rank of Major.

The following doctors have been added to the Manitoba Medical Register: Ernest A. Balls, M.R.C.S., Eng. "45," Harpendin, Herts, Eng.; Ernst Bustin, M.D., U. of Vienna "24," L.M.C.C. "44," Grace Hospital, Winnipeg; Florence Annie Scott, M.D., U. of Toronto "38," L.M.C.C. "38," R.C.A.M.C., Bombay, India.

Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1945 Jan. 28 to Feb. 24	1945 Jan. 1 to Jan. 27	1944 Jan. 30 to Feb. 26	1944 Jan. 1 to Jan. 29	TOTALS Jan. 1 to Feb. 24,'45	TOTALS Jan. 1 to Feb. 26,'44
Anterior Poliomyelitis	1	1	----	----	2	----
Chickenpox	195	271	248	338	466	586
Diphtheria	41	27	10	9	68	19
Diphtheria Carriers	9	7	3	4	16	7
Dysentery—Amoebic	----	----	----	----	----	----
Dysentery—Bacillary	----	----	----	----	----	----
Erysipelas	3	5	8	7	8	15
Encephalitis	1	----	2	----	1	2
Influenza	3	17	33	64	20	97
Measles	65	50	271	117	115	388
Measles—German	3	4	51	7	7	58
Meningococcal Meningitis	1	2	2	3	3	5
Mumps	169	68	348	198	237	546
Ophthalmia Neonatorum	----	----	----	----	----	----
Pneumonia—Lobar	2	6	25	25	8	50
Puerperal Fever	----	----	1	----	----	1
Scarlet Fever	88	57	279	268	145	547
Septic Sore Throat	3	1	3	2	4	5
Smallpox	----	----	----	----	----	----
Tetanus	----	----	----	----	----	----
Trachoma	----	----	----	----	----	----
Tuberculosis	51	16	53	25	67	78
Typhoid Fever	15	2	----	----	17	----
Typhoid Paratyphoid	2	----	----	----	2	----
Typhoid Carriers	----	----	----	----	----	----
Undulant Fever	----	----	1	----	----	1
Whooping Cough	39	37	29	34	76	63
Gonorrhoea	117	125	161	139	242	300
Syphilis	42	65	42	48	107	90

DISEASES *Approximate Populations.	*726,000 Manitoba	*3,825,000 Ontario	*906,000 Saskatchewan	*2,972,300 Minnesota	*641,935 North Dakota
Anterior Poliomyelitis	1	----	----	1	2
Chickenpox	194	1,240	120	----	117
Diphtheria	40	8	7	22	10
Diphtheria Carriers	9	----	----	----	----
Dysentery—Amoebic	----	1	----	11	----
Dysentery—Bacillary	----	----	----	1	----
Encephalitis	1	----	----	1	1
Erysipelas	3	8	----	----	4
Influenza	3	283	----	3	86
Measles	65	425	46	33	6
Measles—German	3	52	12	----	----
Meningococcal Meningitis	1	6	2	6	4
Mumps	169	699	98	----	----
Ophthalmia Neonatorum	----	----	----	----	----
Puerperal Fever	----	----	----	----	----
Scarlet Fever	88	405	30	386	130
Septic Sore Throat	3	6	2	----	----
Smallpox	----	----	5	----	1
Trachoma	----	----	----	----	----
Tuberculosis	48	143	39	8	25
Typhoid Fever	13	2	----	1	3
Typhoid Para-Typhoid	2	----	----	----	----
Undulant Fever	----	6	4	25	----
Whooping Cough	39	289	33	100	4
Gonorrhoea	125	590	----	----	21
Syphilis	65	432	----	----	40

Deaths from Communicable Diseases

January, 1945

Urban — Cancer, 37; Tuberculosis, 11; Pneumonia (other forms), 7; Pneumonia Lobar, 3; Influenza, 3; Syphilis, 3; Diphtheria, 2; Disease of Pharynx and Tonsils, 1. Other deaths under 1 year, 6. Other deaths over 1 year, 168. Stillbirths, 13. Total, 254.

Rural—Cancer, 14; Pneumonia (other forms), 11; Pneumonia Lobar, 7; Tuberculosis, 7; Influenza, 2; Syphilis, 2; Scarlet Fever, 1. Other deaths under 1 year, 15. Other deaths over 1 year, 72. Stillbirths, 6. Total, 137.

Indians—Whooping Cough, 2; Tuberculosis, 1. Other deaths under 1 year, 3. Other deaths over 1 year, 0. Stillbirths, 0. Total, 6.

♦

Diphtheria — Manitoba is still away out in front with number of cases!

Typhoid Fever shows 15 cases (two Indians) reported in this period. Most of these cases are between Headingly and Portage la Prairie and had been using water or ice from the Assiniboine. They may have derived their infection from the river as it is contaminated. Good hygiene and sanitation would wipe out typhoid fever.

Measles, Mumps and Scarlet Fever morbidity is less than at the same time a year ago.

Whooping Cough shows a slight increase.

Manitoba Health Plan 1945

Address by Minister of Health and Public Welfare in Consideration of the Estimates of the Department. (March, 1945)

I. Introduction.

"Life is not to be alive, but to be well." I know of no more fitting introduction for what I have to say than these words, written more than eighteen hundred years ago by Juvenal, one of the greatest of the ancient Roman authors. By common consent the maintenance and improvement of health is a primary concern of every individual and therefore of organized society. It is well known that illness is no respecter of persons; it will be readily admitted that sickness is the greatest hazard in the life of every individual and of the family. During the last fifty years brilliant advances in medical knowledge have greatly improved the weapons at our disposal both for the prevention and cure of disease, but unfortunately full and complete use has not been made of this knowledge. We still have two main problems in this field which we must solve:

First: How to effectively prevent preventable disease;

Second: How to make modern medical skill and services available to all our people.

In solving these problems it is necessary we get down to basic principles, and the plain I shall outline to you is based on certain principles of health service which we think fundamental. The proposed "Act to provide for the Improvement of the Health of the Citizens of the Province" provides the administrative machinery by which and through which we propose to carry these principles into effect.

II. Basic Principles of Plan.

(1) Prevention of Disease—Health Units.

The first of these basic principles is this: The fundamental responsibility of a health service should be to prevent disease. Disease ignores municipal or other boundaries and preventive measures should be organized by the Province in co-operation with the Municipalities in order to direct and supervise preventive service, to ensure effective co-ordination of health programmes and to provide uniform standards such service should be under Provincial control and direction, but operational costs should be shared with the Municipalities.

To carry this principle into effect full time Health Units will be set up covering all of Manitoba. Each Health Unit will be headed by a Medical Director with a staff of Public Health nurses, a sanitary inspector and necessary clerical help. The scope of the work of the Health Unit can best be measured by a brief and partial statement of the duties of the Medical Director:

1. He would be the Health Officer for all the municipalities within the unit, usually four or more municipalities. He would therefore be responsible for the enforcement of all Health regulations, both Provincial and Municipal.
2. He would carry on a full immunization programme against those diseases which could be so controlled, including diphtheria, typhoid, whooping cough and scarlet fever.
3. He would be responsible for the control of venereal disease and tuberculosis, co-operating with and arranging for clinics where necessary.
4. He would develop the preventive field in maternal and child care.
5. He would make periodic examinations of all the school children in the area.
6. He would act as a consultant in communicable diseases to all of the practising physicians of the district.
7. He would supervise a programme embracing the whole field of sanitation.
8. He would make the Health Unit the center of health education, including venereal disease, tuberculosis, maternal and child care, and nutrition.

The nurses of the Health Unit would assist at all clinics, pay routine visits to the schools, but the greater part of their time would be taken up with home visiting for communicable diseases, follow-up work in connection with defects uncovered in school examinations, and pre-natal and post-natal work under the direction of the regular medical practitioners. The sanitary inspector would devote his full time to the work of sanitation, under supervision of the Medical Director.

This may seem to be a difficult programme to carry out effectively, but it must be remembered that the staff engaged in the work will be specially trained for it; they will have no other duties; their whole and only field of endeavour will be the prevention of disease. It must be emphasized that under no circumstances will they be competing or interfering with private practitioners.

May I point out some of the advantages of a health unit plan such as I have indicated:

(1) It provides the proper basis on which to build a scientific health programme in the province and provides a logical and natural foundation for any health scheme.

(2) It completely relieves the municipalities of all provision for and payment of health officers.

(3) It also relieves the municipalities of certain responsibilities that are optional with them

now, including immunization programmes and periodic examination of school children.

(4) It offers rural medical practitioners consultative and co-operative services in regard to all forms of preventive medicine, but does not in any way interfere with their practice or infringe upon their rights.

(5) The health unit plan offers the most effective approach in solving our present problems in reference to maternal mortality, tuberculosis, and venereal disease.

The estimated cost of this service is $1.00 per person per year. Two-thirds of this cost (67c per person) will be assumed by the Province and the balance of one-third (33c per person) by the Municipality. This division of costs is much more favorable than that now in effect in existing Health Units where the Municipalities assume 50% of the cost. Provision of Health Units such as suggested will relieve both the Province and the Municipalities of certain existing expenditures for which they are now responsible. The Municipalities will save the cost of Health Officers, sanitary inspectors, any costs incurred for immunization programmes, etc. The actual net cost to the province after deducting these savings would be $265,-300.00, and to the municipalities, excluding Winnipeg, $71,000.00. In actual net cost the share of the municipality is therefore less than 33c per person per year.

Part I of the proposed legislation makes provision for the setting up and control of Health Units. May I call your attention to certain features of this legislation:

1. Municipalities cannot be compelled to enter the plan; they enter voluntarily by resolution of the Council or by vote. (Section 11.)

2. There is a local advisory board for each Health Unit; the majority of the members are appointed by the municipalities and a minority by the Minister. (Sect. 11.) This insures local co-operation as well as an opportunity for local opinion to express itself.

3. The local board is given power to make recommendations to the Minister with respect to the personnel of the staff (Sect. 17-5), but the entire staff is made part of the Civil Service of the Province. (Sect. 14.)

(2) Diagnostic Facilities.

May I pass on now to the second principle of the plan: If any doctor is to practise medicine scientifically he must have readily available diagnostic facilities, both of the X-ray and the laboratory type; such equipment should be compulsory for all hospitals, both rural and urban; and the necessary diagnostic tests required by any patient should be provided free, other than a small service charge.

I think I can say without fear of contradiction that no doctor can render his best service or practise medicine in a modern scientific manner without such facilities. If serious illness is to be prevented, it must be diagnosed in its early stages; if it is to be cured the exact nature of the illness must be determined; in either case diagnosis is all-important, and effective diagnosis is impossible without modern diagnostic facilities. Well-trained doctors will not be procurable for practice in rural Manitoba unless such services are available at strategic points throughout the Province. Even in the large urban centres of population, such as the Greater Winnipeg and Brandon areas, while these facilities are now available there are very definite limitations which greatly reduce their usefulness. Indigents are provided with such services free; wealthy individuals can afford to pay for them; but what of the great middle-class? I think it is true to say that the urban practitioner finds that as a matter of economy a very large number of his patients cannot afford to pay for the necessary diagnostic procedures, whereas as a matter of good medical practice such tests are an absolute necessity. We propose that the common diagnostic tests, including X-ray, be made available throughout the whole province, and we propose that when authorized by a medical practitioner any patient in Manitoba should be able to secure these tests free of charge. We propose to do this by requiring a standard type of diagnostic equipment to be provided in all general hospitals, including reasonably adequate X-ray equipment and a properly equipped laboratory capable of performing all the common diagnostic tests. This would mean that every physician in the province would have close at hand procedures available to help him make diagnosis in any given case without any limitation because of their cost to the patient.

Regarding the cost of diagnostic service, the capital cost for the equipment above mentioned would be very large, and we estimate it would total $300,000. We suggest that this capital cost be the sole responsibility of the Province itself.

Regarding the operational costs, we believe that in rural areas the sum of 50c per person will cover the current expenditures. We recommend that this cost be divided on the basis of 33c to the Province and 17c to the Municipality per person. If the cost should exceed 50c per person in rural Manitoba, and this is most unlikely, the additional cost would be assessed against the Municipality, but the service charge fund would probably carry this.

In regard to the Winnipeg area, the problem is entirely different. At the present time sufficient X-ray equipment and satisfactory laboratory service is available. In other words, no capital cost would be necessary, provided use could be made of existing facilities. Consequently, we propose to offer to the residents of the City of Winnipeg the same measure of assistance as we are prepared to pay

in rural Manitoba for operation costs, namely, 33c per person per year, or a total of approximately $70,000 per year. If Winnipeg desires to take advantage of the plan it will thus have the same measure of provincial assistance we are offering to other parts of the Province. It will probably be necessary and advisable to delay the decisions in regard to these services in Winnipeg until the actual cost has been ascertained.

The provision of diagnostic services is a new thing, and we have little previous experience of other places on which to base costs. I would point out that in regard to this part of the plan we propose to:

First: Have the commission appointed under the Act determine what diagnostic services should be provided. The services will be limited to the necessary usual tests but will not include all tests.

Second: Regard this year 1945-46 as one of experiment and demonstration and provide the services in one trial area before extending to the whole province. The limitation of technical personnel makes this necessary.

The advantages of the plan of providing diagnostic services can be briefly summarized as follows:

(1) It will eventually put at the disposal of every medical practitioner in Manitoba most of the scientific equipment necessary for proper diagnosis and modern medical treatment.

(2) It is an inducement for the young and ambitious medical practitioner to practise in rural areas.

(3) It brings close to all patients throughout the province most of the advantages of modern diagnosis and treatment, and enables them to remain at home when otherwise they might have to leave home.

(4) It lifts the whole standard of rural practice, by improving the means of service.

(5) The fact that the services are free, subject to a small service charge, means every person, irrespective of means, will have the advantage of modern diagnostic equipment and modern tests.

(6) By placing this equipment in rural hospitals it helps to raise their standing and lowers their costs.

(7) The plan gives to the urban citizen of moderate means—the great middle class—a relief that is very definitely needed and, at the same time, one that will be appreciated by the general practitioner in the large urban centre.

A word as to costs: On the basis of the present population the annual operational cost would be $242,600 to the province and $122,400 to the municipalities, or a total of $365,000 per year. The capital expenditure required to supply the necessary standard equipment to establish adequate diagnostic services throughout rural Manitoba will be $300,000, and this capital cost would be a Provincial responsibility.

The legislation giving effect to this part of the plan is contained in Part II of the Act. I would call your attention to the following points:

(1) No municipality will be compelled to come under this plan, but any municipality in a health unit area will have the privilege of so doing by passing a resolution to that effect.

(2) Diagnostic services will be provided in two types of hospitals:

(a) The central hospitals at Winnipeg, Brandon and Dauphin, where highly expert trained help will be available who, in addition to supervising the services in that area, will also regularly visit and inspect the services provided by smaller hospitals.

(b) Combined technicians capable of doing the more common type of laboratory tests and X-ray work will be stationed in the smaller hospitals and subject to the inspection of the senior officials at the large general hospitals. The regulations under Section 19 of the Act will provide for this arrangement.

(3) In order the services may not be taken advantage of by those not entitled, an identification card will be issued to every resident of each municipality coming under the plan, and presentation of this will entitle such individual to the services. Identification cards for any part of unorganized or disorganized territory that lies within a unit will be issued by the Department. (Sec. 20.)

(4) The diagnostic facilities in any unit shall not be used for or on behalf of any person except on the request of a duly qualified medical practitioner. (Sec. 21—1.)

(5) Every qualified person holding an identification card shall pay a service charge of such amount as shall be fixed in the regulations. We suggest the service charge should be $1.00 for the first X-ray plate and 25c for each subsequent X-ray plate, with probably no charge whatever for laboratory tests, the total for one illness not to exceed $5.00. (Sec. 21—4.)

(6) The revenue from the services charges shall be used to pay any surplus or additional charges the municipality may have over and above 50c per person per year.

(3) Medical Care.

I come next to the third basic principle, namely, the provision for curative medicine. This can be stated as follows:

(1) The services of a general medical practitioner should be readily available to all people of our Province when they are ill.

(2) In view of the disabling effects of such illness, the cost should be provided for in advance.

(3) Imposing a municipal tax distributes the burden most equitably.

(4) Payment for provision of such services should be a matter of arrangement with the medical practitioner and may be by way of salary, by way of capitation fee, or by way of payment for services rendered, or by any combination of these.

(5) When any municipality enters fully and co-operatively into the disease prevention programme, i.e., provides for health units and diagnostic services, the Province should make a contribution to the cost of curative medicine in such municipality.

We are glad to note that in the City of Winnipeg, a very forward-looking step has been taken by the medical profession itself through the Manitoba Medical Service which provides for payment of the cost of illness in advance. All our experience indicates that a very satisfactory type of general practitioner service can be provided by engaging a doctor on a salary basis, or by payment on a capitation fee basis, or payment for services rendered or any combination of these. Whatever plan is followed, we believe a general practitioner service should be available to all of our people and should include such medical care and supervision as can be given in the patient's own home or in the doctor's office or the local hospital, including maternity work and minor surgery, but not including major surgery.

The advantages of this type of service to the public would be:

(1) The fear of illness on the part of the population would be removed in that a doctor would be readily available without any question of there being a financial barrier between the physician and the patient.

(2) At least ninety per cent of the medical work required by the individual could be supplied without the necessity of the patient leaving his own community.

(3) As a natural development of such type of practice, the doctor would more and more direct his efforts toward the prevention of disease and the improvement of public health.

(4) Payment for medical care in advance in various ways has already been proven in practice to be entirely satisfactory.

In rural Manitoba we believe that this type of service can be provided at a cost of $3.00 per year per person. We suggest that if and when the municipalities or sufficiently large local areas enter under such plan the Province should assist such municipality. That assistance would be subject to two conditions:

(1) The municipality would be required to enter fully and co-operatively into the provincial plan regarding health units and diagnostic services.

(2) The municipality would be required to provide for the cost of such services in advance.

Subject to these conditions being met, the Province would undertake to pay one-sixth of the cost on the basis of $3.00 per person per year, the other five-sixths being paid by the municipality.

It is impossible to estimate with any degree of accuracy what the financial obligations would be as far as the municipalities are concerned in regard to this part of the plan, unless and until we know the basis on which medical services were paid. However, the provincial contribution would be one-sixth of the cost up to the maximum per capita aforementioned in organized municipalities, and in unorganized territories one-half of the cost would be carried by the Province.

The legislation giving effect to this part of the plan is set out in Part III of the Act, and to a very large extent it adopts existing legislation we already have for engaging of physicians as municipal doctors. It does, however, greatly widen the methods by which municipalities can pay for medical care in advance. We consider provision for medical care in advance a vital, basic and fundamental principle of the plan, and have gone as far as we possibly can to encourage municipalities and physicians to make arrangements to this end. I would like to call your attention to the following points:

(1) Provision for engagement of physicians under terms that will provide for medical care in advance, either by payment of salary, a capitation fee or by way of payment for services rendered is set out in Section 25. Again the choice is left entirely to the municipalities and there is no compulsion whatever.

(2) Provision for payment for raising funds by taxation under this section is covered in Section 26. This should be read in the light of the further powers referred to later herein in Section 52 as far as the raising of money is concerned.

(3) Provision is made that if the municipality enters fully into the preventive service plan of the Government by contributing to a local health unit and diagnostic services unit, the Government will pay to the municipality the sum of 50c per person per year towards the cost of medical care.

(4) Provision for the establishment of nursing stations is provided for in Section 28.

(4) Hospitals.

The fourth basic principle of our plan is concerned with the provision for the necessary hospital accommodation and control, and may be stated as follows:

(1) Sufficient and adequate hospital facilities, available to all the people in the Province, should be provided.

(2) To prevent duplication of services, to avoid unnecessary expense and to maintain a high standard of hospital efficiency, the Province should be divided into hospital areas; a Hospital Council, advisory to the Minister, should be responsible for the setting up of such areas and for supervision of hospitals, including definite standards of building, equipment, accounting and service.

(3) Other than the provision of diagnostic equipment by the Province, the capital cost of building and equipping hospitals should be borne by the local area; where a hospital is built or operated as a municipal institution, the immediate area where the hospital is located should pay a higher percentage of capital and operation costs than the rest of the area.

It is definitely recognized we have certain problems to face in regard to hospitalization; there is the necessity of increasing the number of hospital beds; there is a necessity of providing small modern hospitals in certain areas; there is need for the rebuilding, enlargement or renovation of most of the existing hospital buildings in rural Manitoba; there is need for increased per diem grants to hospitals if they are to operate satisfactorily. We propose to meet these problems in the following way:

(1) To set up a Hospital Council for the purpose and with the authority recommended. This has already been done.

(2) To divide the Province into hospital districts for the purpose of hospital construction, operation and maintenance. This has been done.

(3) To provide additional hospital beds in rural Manitoba by authorizing the building of six small, modern hospitals and the rebuilding, enlargement or renovation of all existing hospital buildings outside of the Greater Winnipeg area.

(4) To provide adequate diagnostic facilities in all approved hospitals.

(5) To increase per diem grants to hospitals.

The advantages of our recommendations as aforementioned can be briefly summarized as follows:

(1) The plan provides for part of the necessary increase in hospital facilities.

(2) The plan as proposed brings hospital facilities nearer to the people.

(3) It definitely raises the whole standard of hospital care, particularly in rural areas.

(4) The provision for improved hospitalization, particularly in rural areas, will induce young and ambitious medical practitioners to settle and remain in rural areas.

(5) Rural hospitals of the type and quality recommended would provide complementary service to that given by the health units, and in many instances the health unit office might be properly located in the hospital, saving overhead expenses.

Part IV of the Act covers the provision for the formation of hospital districts. Here again, the principle of the local areas retaining autonomy is made operative and effective. The actual district itself is set up by a Hospital Council, but administration of hospital facilities within the district is placed in the hands of a local hospital board. The following points should be noted:

(1) The legislation encourages the municipalities to provide hospital services but does not prevent any hospital board appointed by the municipalities in any district making arrangements with any religious order or any other group to provide such services. (Section 40.)

(2) The actual boundaries of the hospital district will be set up by the Provincial Hospital Council, but will be subject to variation by arrangement between the different hospital districts or on appeal to the Council.

(3) Provision is made that the area immediately adjacent to the hospital shall pay a higher rate of taxation for the support of it than more distant areas. (Section 40—5.)

(4) In order to ensure the erection of a proper type of building, and the maintenance of proper equipment, the approval of the Minister is required before the construction of any hospital can be proceeded with. (Section 41—2.)

(5) Where the approval of the ratepayers is required for the building of a hospital, a three-fifths vote approving of money expenditures is required. (Section 44.)

(6) The members of the Hospital Board in each district are appointed by the Municipalities within the district.

(5) General Provisions of Act.

The Act is, in part, a consolidation of a great deal of existing legislation found in other Acts; in part, it is entirely new. All the administrative machinery dealing with the Health Plan is included in this Act, but certain collateral legislation in regard to the Hospital Council is found in other Acts.

One of the most important sections of the present Act is that dealing with the setting up of the Advisory Commission. The personnel of this Commission is set out in Section 7. The Commission will consist of eleven members, one of whom will be the Deputy Minister of Health and Public Welfare, and the other ten members appointed by the

Lieutenant-Governor-in-Council, of whom three members are to be nominated by the Executive of the Manitoba Division of the Canadian Medical Association, three members to be nominated by the Executive of the Union of Manitoba Municipalities, one member by the Board of Governors of the University of Manitoba from the Faculty of Medicine, and three members to be nominated by the Minister. The members of the Commission serve without remuneration, but are paid out-of-pocket expenses. While their position is that of an Advisory Commission, they have very large powers, particularly in regard to regulations. It is obvious with an Act such as this, the actual operative machinery will be through regulations. It is provided that no regulation made under the Act has force or effect until it has been approved by the Commission. The Commission will also serve in an advisory capacity, particularly in regard to such matters as the amount to be charged in regard to service fees, the type of diagnostic services to be provided under the Plan, and generally advisory in regard to the operation of the Plan itself.

Part V of the Act is one of the most important sections, inasmuch as it provides for a new type of taxation of which municipalities can take advantage, namely, a personal health levy. This legislation has been effective in Saskatchewan for some seven years, and has been found to be most effective, as well as acceptable to the people of the province, inasmuch as the proceeds therof go to the protection of their health. As a matter of fact, this levy is in effect health insurance. Section 53 provides that a municipality may, if they wish—but again there is no compulsion to use this method of raising funds for health purposes—impose a personal health levy which every resident of the municipality over twenty-one years of age and every self-supporting person under twenty-one years of age shall pay. The amount of the personal health levy is subject to the approval of the Minister, both as regard to the levy on an individual and the levy on a family. It is felt that that form of taxation will help relieve the burden on land, and if the experience in Saskatchewan is any judge, it will be readily paid. No municipality can impose this type of levy without the consent of three-fifths of their ratepayers. Provision is made in Section 54 for the method of imposing the personal health levy and collecting the same.

One of the most important sections of the Act is that set out in Section 56 dealing with grants. It is recognized that the successful operation of a health plan of this kind will depend on the type of medical graduates, as well as the necessary technical personnel, including technicians, public health nurses, and sanitary inspectors. Provision is made for the province assisting such individuals not only to get training, but to get the most effective type of training. This assistance can be given by way of bursaries or scholarships, or the province might undertake itself the training of personnel.

The same section also provides for the encouragement of research in matters relating to health. The feeling of the Government in this connection is that any type of medical education or health service that does not stress the importance of research is failing in one of its main purposes. The Government proposes to encourage research, but it also feels definitely that there should be a well-thought-out integrated federally controlled plan of research into which the province could enter, and with which it could integrate and co-ordinate its own more limited field of research. It is obvious that the work of the Nutrition Laboratory in Manitoba could be and should be related to the work of the nutrition laboratories in other parts of Canada, and this is equally true in other fields. Therefore, the Government proposes to set up a small technical committee advisory to the Department in this connection, in order to carry these ideas fully and effectively into operation.

Under Section 57 it is provided that the Minister, on behalf of the Government, may enter into agreements with the Dominion of Canada for the purpose of making effective any of the provisions of the Act itself and, in this connection, we can only say we hope such opportunity offers.

III. Summary of Advantages of Plan

The advantages of the entire Plan in the light of the foregoing statements may be briefly summarized as follows:

(1) The Plan is a fundamental one, designed with a view to enlargement and capable of being integrated readily and easily into any Federal national health insurance plan.

(2) The Plan properly emphasizes the vital importance of preventive medicine and is designed to encourage and develop it.

(3) The Plan is capable of gradual introduction and any difficulties or errors in administration could be corrected before it becomes province-wide.

(4) The Plan recognizes the fact that the greatest immediate need for improvement in health services is in rural Manitoba, and aims to provide the best health services in rural areas consistent with reasonable cost.

(5) The Plan by providing good rural hospitals and modern diagnostic facilities, will attract and keep capable medical practitioners in rural Manitoba; as far as possible it will provide for the

treatment of patients at home or in a hospital reasonably near to home.

(6) The Plan when in operation offers the citizens of Winnipeg, with average means, financial assistance for medical expenses where they need it most; it offers the general practitioner that form of scientific co-operation he most appreciates.

(7) The Plan will provide adequate diagnostic facilities and consultant services in public health for every practitioner in Manitoba.

(8) The Plan is based on the belief that all the people of this Province are entitled to good medical care in their own immediate community, and to hospital facilities within a reasonable distance; it recognizes that the method of providing such services will vary not only as between urban and rural areas, but as between one rural area and another, depending on the needs of the area and the wishes of the people.

(9) The Plan is basically a democratic one; it regiments neither the public nor the profession; it allows the people of each municipality to decide for themselves the type of medical care they desire and the method of payment for the same; it leaves the members of the medical profession free to make whatever arrangements with local communities they see fit.

IV. Introduction of Plan

I think it is important that you should recognize that the Plan we have presented is a long range programme, capable of being enlarged and expanded. Under the Dominion proposals for National Health Insurance, grants were payable for certain services, with the result that in the event of National Health Insurance being introduced—and in a recent broadcast the Dominion Minister of National Health and Welfare, Honourable Brooke Claxton, stated the National Health Insurance Act would be introduced, after consultation with the Provinces—in such an event we would be immediately entitled to demand and receive payment for such services as we had in operation. This is tremendously important, because the cost of the health services offered under this Plan would be greatly reduced, both to the Province and to the Municipality. If the Plan we have outlined was completely in operation at the time of the introduction of health insurance, there would be due and owing to Manitoba by the Federal Government $1,175,000, and of this amount $780,000 would be available for distribution among the municipalities, reducing the cost of the Plan to them to that extent, and the balance would be available for reducing the cost to the Provincial Government.

It should also be noted that the programme as outlined must be introduced gradually, owing to the lack of medical and nursing personnel. In addition, the co-operation of all the interested parties in each area, particularly the municipalities, must be obtained.

V. Conclusion

In regard to the attitude of the medical profession, it is a matter of record that the Canadian Medical Association has officially gone on record as approving of the principle of Health Insurance. The plan now suggested is a form of health insurance. I have had an opportunity of discussing the general principles of the proposals with all of the district medical societies, as well as the Executive of the Provincial Association. As a result of these discussions, we have received a great many valuable suggestions and much helpful advice, and we have modified and altered our legislation accordingly. There is on the part of the profession a keen desire to provide the best medical care possible for our people, but definite differences of opinion as to how this can best be accomplished exist. There is a natural and understandable attitude that while recognizing and admitting the responsibilities of the profession to the public, there is also a responsibility to the profession itself. On certain basic principles, particularly the payment of salaries for medical services, the Medical Association is opposed. On the whole, however, I can bear testimony to the fact that on the part of the medical profession in this province there is a genuine desire to serve the needs of the people by providing the best health care possible, and to the extent that this plan accomplishes that end there has been and will be a very large measure of support and co-operation on the part of the profession of this province.

Regarding public opinion, there is no doubt in my mind as to the feeling of our people: they are more health-conscious now than ever before. The fact that during the last year they paid for more hospital days than at any other time in the history of the Province of Manitoba, the fact that Municipal Councils are ready and willing to give additional financial support in order to provide better health services, all provide an eloquent testimony to the same end. But it is important and desirable that our people should have not only a desire for better health services, but a clear understanding of how they can be and should be provided. It is with this idea that I have gone fully into the details of the proposed legislation with the hope that a clear understanding will make clear our essential purposes.

This Plan is essentially democratic; there is no regimentation about it. Any district or any municipality can come in or stay out as they wish. I believe that this Plan is practical and workable, but it is not workable without the active and enthusiastic support of the people and the profession.

"BUNDLES FOR CIVILIANS"

The recent release of penicillin for civilian use has made available to the physicians of Canada one of the greatest developments of war medicine.

The sodium PENICILLIN presented under the name of Frank W. Horner Limited is manufactured by the Heyden Chemical Corporation of New York—one of the largest producers in the world.

Canadian physicians may now prescribe sodium PENICILLIN (Horner) in the standard 100,000 Oxford Unit vial which is available at dispensing druggists throughout the country.

FRANK W. HORNER LIMITED

Published by the Manitoba Medical Association, 510 Medical Arts Building, Winnipeg, Canada.
Printed by Roscoe & Hickson, 352 Cumberland Ave., Winnipeg, Canada.

A Young Lady's First Impressions